Kenogami Forest

Independent Forest Audit

2005-2010

Arbex Forest Resource Consultants Ltd.

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Table of Contents

1.0. EXECUTIVE SUMMARY I

2.0. TABLE OF RECOMMENDATIONS IV

3.0. INTRODUCTION 1

3.1. AUDIT PROCESS 1
3.2. MANAGEMENT UNIT DESCRIPTION 2
3.3. CURRENT ISSUES 7
3.4. SUMMARY OF CONSULTATION AND INPUT TO THE AUDIT 8

4.0. AUDIT FINDINGS 9

4.1. COMMITMENT 9
4.2. PUBLIC CONSULTATION AND ABORIGINAL INVOLVEMENT 9
4.3. FOREST MANAGEMENT PLANNING 10
4.4. PLAN ASSESSMENT AND IMPLEMENTATION 12
4.5. SYSTEM SUPPORT 16
4.6. MONITORING 17
4.7 ACHIEVEMENT OF MANAGEMENT OBJECTIVES & SUSTAINABILITY 18
4.8. CONTRACTUAL OBLIGATIONS 21
4.9. CONCLUSIONS AND LICENCE EXTENSION RECOMMENDATION 21

APPENDICES

List of Tables

TABLE 1. RECOMMENDATIONS IV
TABLE 2. AREA SUMMARY OF MANAGED CROWN LAND BY LAND TYPE 4

List of Figures

FIGURE 1. LOCATION OF THE KENOGAMI FOREST IN THE PROVINCE OF ONTARIO 3
FIGURE 2. PROPORTIONAL REPRESENTATION OF FOREST COVER TYPES ON THE KENOGAMI FOREST 5
FIGURE 3. AGE CLASS AREA DISTRIBUTION BY COVER TYPE 6

1.0. Executive Summary

This report presents the findings of an Independent Forest Audit (IFA) of the Kenogami Forest (SFL # 542256) conducted by Arbex Forest Resource Consultants Ltd. for the period April 1, 2005 to March 31, 2010. Procedures and criteria for the IFA are specified in the 2010 Independent Forest Audit Process and Protocol (IFAPP). This audit assessed the forest management activities of Terrace Bay Pulp Inc. (TBPI) and the Ontario Ministry of Natural Resources (OMNR), Nipigon District. At the time of the field audit, Terrace Bay Pulp Inc. was under Companies' Creditors Arrangement Act (CCAA) protection. On September 16, 2010 the company officially exited creditor protection. The mill re-opened on October 4. The bankruptcy of Buchanan Forest Products Ltd. (BFPL) resulted in GreenForest Management Inc. being contracted to perform responsibilities as the forest management service provider on behalf of the SFL holder.

The full implementation of the 2005 FMP was negatively impacted by the economic downturn in the forest sector which resulted in mill closures, the transfer of the SFL and staff layoffs. The labour dispute at Neenah Paper also negatively impacted the achievement of planned harvest and silvicultural targets, and compliance with SFL contractual requirements during the audit term. We provide thirteen recommendations to address identified contractual shortcomings and/or improve the delivery of the forest management program on the unit. Despite the shortcomings identified, our assessment is that forest sustainability is fundamentally being achieved as assessed through the IFAPP. This conclusion is premised on the following achievements:

- The long term management direction in the 2005 FMP (and 2010 Contingency Plan) and their related management objectives are consistent with the attainment of forest sustainability.
- Appropriate information was available to support forest management planning efforts and in instances where there were information shortfalls appropriate measures had been enacted to address the issue(s).
- Forest management planning adhered to FMPM requirements.
- Appropriate silvicultural ground rules were adopted and the silvicultural treatment packages were appropriate for observed field conditions.
- Areas of Concern were appropriately protected through proper planning and management prescription implementation.
- Forest management activities (e.g. harvest, renewal, tending) adhered to FMP requirements. Field operations were implemented with minimal environmental degradation.
- Renewal operations are generally in balance with harvest operations.

- Forest operations were compliant with the Crown Forest Sustainability Act (CFSA), Forest Management Plans and approved manuals.
- None of the reported trends in the Comparison and Trend Analysis of Planned vs. Actual Forest Operations Trends Report indicates a threat to forest sustainability.

However, we do have some significant concerns. These include:

- While our assessment is that the SFL holder has implemented the caribou mosaic strategy in accordance with the provincial policy direction, we are concerned that forecast caribou habitat creation may not be achievable should the planned harvest levels continue to be underachieved.
- There are major discrepancies with respect to findings related to silvicultural success between the OMNR data reported in Silvicultural Effectiveness Monitoring Reports and those reported by the SFL holder in Annual Reports. These discrepancies complicate the assessment of forest sustainability and the achievement of forest cover objectives.
- The current inventory of unutilized wood left in the bush was a significant concern during this audit. An estimated 245, 801 m^3 of harvested timber remains in the bush. A significant portion of this wood was harvested in the prior audit term, and has deteriorated to the extent that it is likely unmarketable for use other than as biofuel.
- Crown dues and Trust payments are outstanding on the unutilized wood.

The audit team spent considerable time deliberating whether to recommend conditionally extending or not extending the SFL for a further five years. We recognized the particularly difficult circumstances related to the economic downturn in the forest sector (i.e. transfer of the SFL and management responsibility, mill curtailments and closures, cessation of harvest activities) and their significant contribution to the inability of the SFL holder to meet its contractual obligations related to wood utilization and Trust and Crown dues payments. Many of the other shortcomings identified in the audit were directly attributable to the prolonged labour dispute and/or staff reductions as the industry downsized. Had these extenuating circumstances not existed we would have elected to recommend that the licence not be extended.

Other factors that influenced our decision on the licence extension were:

- During the audit term, most FMP objectives were met.
- The Ontario Government, in its role as administrator of the Forest, was cognizant of wood utilization issues and the status of Trust and Crown dues payments but did not fully address them.

- Issues related to liens, ownership and obligations with respect to the payment of outstanding balances are being addressed in the courts and by the CCAA appointed Receiver.
- TBPI has exited creditor protection (with support from the Ontario government) and we observed tangible evidence of efforts by the SFL holder and the new forest management service provider to positively address the major shortcomings.

Given these facts, we concluded that the following conditional licence extension was warranted:

The audit team concludes that, with the critical exceptions noted below, management of the Kenogami Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Sustainable Forest Licence held by Terrace Bay Pulp Inc. Forest sustainability is being achieved, as assessed through the Independent Forest Audit Process and Protocol. The critical exceptions are as follows:

- An estimated inventory of 245,801 m^3 of felled and unutilized timber is present on the unit.
- Forestry Futures Trust, Ontario Crown dues and Forest Renewal Trust payments are outstanding.

Therefore, the audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542256 for a further five years, only on confirmation that the following conditions have been satisfied:

- The SFL Holder and the District OMNR/MNDMF need to determine what portion of the unutilized wood harvested under the Neenah Paper Company of Canada SFL is marketable, and agree on a strategy for its utilization within six months of the submission of the Audit Report.
- The SFL holder work with the OMNR/MNDMF to develop a plan within six months of the submission of the Audit Report for the payment of Forestry Futures Trust, Ontario Crown Dues and Forest Renewal Trust payments which are outstanding as of March 31, 2011.

2.0. Table of Recommendations

TABLE 1. RECOMMENDATIONS

Recommendation on Licence Extension

The audit team concludes that, with the critical exceptions noted below, management of the Kenogami Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Sustainable Forest Licence held by Terrace Bay Pulp Inc. Forest sustainability is being achieved, as assessed through the Independent Forest Audit Process and Protocol. The critical exceptions are as follows:

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Therefore, the audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542256 for a further five years, only on confirmation that the following conditions have been satisfied:

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- The SFL holder work with the OMNR/MNDMF to develop a plan within six months of the submission of the Audit Report for the payment of Forestry Futures Trust, Ontario Crown Dues and Forest Renewal Trust payments which are outstanding as of March 31, 2011.

Recommendations Directed to SFL Holder / OMNR District

Recommendation # 1:

In SFMM modeling for the 2011 FMP, the SFL Holder should ensure;

1) all areas have silvicultural intensity codes consistent with the latest FIM technical specifications,

2) the accurate depiction of FTG and non-FTG areas,

3) a rationale is provided for FTG assumptions,
4) the modeled and FMP reported areas match,
5) patent lands are excluded from the SFMM modeling and are not contributing to the achievement of plan objectives.

Recommendation # 2:

For the 2011 FMP, the planning team should concentrate socio-economic analysis efforts more directly on the effects of forest management activities.

Recommendation # 3:

The SFL holder must ensure that qualified staff/contractors supervise tree planting operations and that the level of supervision is sufficient to ensure the delivery of a high quality planting program.

Recommendation # 4:

The SFL holder must correct invoicing errors in the *Forest Roads and Maintenance Agreement* Activity Summary and Final Report.

Recommendation # 5:

The SFL holder should develop and implement a formal roads monitoring/tracking program.

Recommendation # 6:

District OMNR and the SFL Holder should review FTG survey methodologies to address data discrepancies related to silvicultural success and stocking achievement.

Recommendation # 8:

The SFL holder and the OMNR must address the backlog area requiring free-to-grow survey and the SFL must complete the survey of Z category lands.

Recommendation # 9:

The District OMNR should work with MNDMF to develop and implement an effective system to track and monitor the payment of Crown dues on harvested wood to ensure that required Trust and Crown dues payments are made.

Recommendation # 10:

The SFL Holder and the District OMNR/MNDMF need to determine what portion of the unutilized Neenah Paper wood is marketable and agree on a strategy for its utilization within six months of the submission of the Audit Report.

Recommendation # 11:

The SFL holder work with the OMNR/MNDMF to develop a plan within six months of the submission of the Audit Report for the payment of Forestry Futures Trust, Ontario Crown Dues and Forest Renewal Trust payments which are outstanding as of March 31, 2011.

Recommendation # 12:

The SFL holder and the District OMNR must ensure the Action Plan and Status Report responding to IFA recommendations are submitted in accordance with the reporting timeline specified in the IFAPP.

Recommendations Directed to Corporate or Regional OMNR

Recommendation # 7:

Corporate OMNR should require that District OMNR SEM results be incorporated into the Annual Report process and used to validate the analysis of silvicultural and renewal success conducted by the SFL holder.

Recommendation # 13:

Corporate OMNR should work with the MNDMF to remove the wood supply commitment to Tembec Hearst from Appendix E of the SFL.

3.0. Introduction

This report presents the findings of an Independent Forest Audit (IFA) of the Kenogami Forest (SFL # 542256) conducted by Arbex Forest Resource Consultants Ltd.[1] for the period April 1, 2005 to March 31, 2010. This audit assessed the forest management activities of Terrace Bay Pulp Inc. (TBPI) and the Ontario Ministry of Natural Resources (OMNR), Nipigon District.

At the time of the audit, the economic situation for forest industries dependent on wood supply from the Kenogami Forest was particularly severe. The full implementation of the 2005 FMP was negatively impacted by the economic downturn which resulted in mill closures, the transfer of the SFL and staff layoffs. The labour dispute at Neenah Paper negatively impacted the achievement of planned harvest and silvicultural targets, and the meeting SFL contractual requirements. In total, during the audit term there was approximately 21 months where no harvesting or wood movement occurred and an additional 11 months where a labour dispute disrupted operations. A chronology economic impact of the economic downturn on the management of the Kenogami Forest is provided in Section 3.3. At the time of the field audit, TBPI was under Companies' Creditors Arrangement Act (CCAA) protection. On September 16, 2010 the company officially exited creditor protection and the mill re-opened October 4, 2010.

The bankruptcy of Buchanan Forest Products Ltd. (BFPL) resulted in GreenForest Management Inc. being contracted to perform responsibilities as the forest management service provider on behalf of the SFL holder.

3.1. Audit Process

The Crown Forest Sustainability Act (CFSA) requires that Sustainable Forest Licences (SFL) be audited every five years by an independent auditor. The audit also applies to the Ontario Ministry of Natural Resources (OMNR), and all licencees on the SFL. The audit reviews the applicable Forest Management Plan (FMP) in relation to relevant provincial legislation, policy, guidelines and Forest Management Planning Manual (FMPM) requirements, including a review of field operations and required monitoring and reporting. The effectiveness of forest management activities is examined based on planned vs. actual results as verified through record examination and field sampling. The audit reviews whether actual results in the field are comparable with planned results and determines if they are accurately reported. A further discussion of the Audit Process is provided in Appendix 4.

Procedures and criteria for the IFA are specified in the 2010 Independent Forest Audit Process and Protocol (IFAPP). The Forest Management Plans (FMPs) within the audit scope include the 2005-2010 Forest Management Plan (5 years of implementation) and the 2010-2011 Contingency Plan (planning process).

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[1] A list of the audit team members and their qualifications is presented in Appendix 6.

3.2. Management Unit Description

The Kenogami Forest is located approximately 300 kilometres northeast of Thunder Bay, in the OMNR Nipigon District. The municipalities of Terrace Bay, Schreiber, Longlac, Geraldton and Nakina are located within its boundaries.

There are six aboriginal communities with an interest in the Kenogami Forest (Pays Plat First Nation, Ginoogaming First Nation, Long Lake Reserve 58 First Nation, Aroland First Nation, Animbiigoo Zaagi'igan Anishinaabekk (AZA) and the Constance Lake First Nation). In the development of the 2010-2011 Contingency Plan the Biinjitiwaabik Zaaging Anishinaabek, the Ojibways of Pic River and the Bingwi Neyasshi Anishinaabek First Nations also asserted an interest in the Forest.

The Forest is licenced to Terrace Bay Pulp Inc. under the terms and conditions of Sustainable Forest Licence (SFL) No. 542256. The SFL was transferred to TBPI from the Neenah Paper Company of Canada in August 2006. At the time of the field audit TBPI was under CCAA protection.

The unit is administered by the Ontario Ministry of Natural Resources, Nipigon Administrative District.

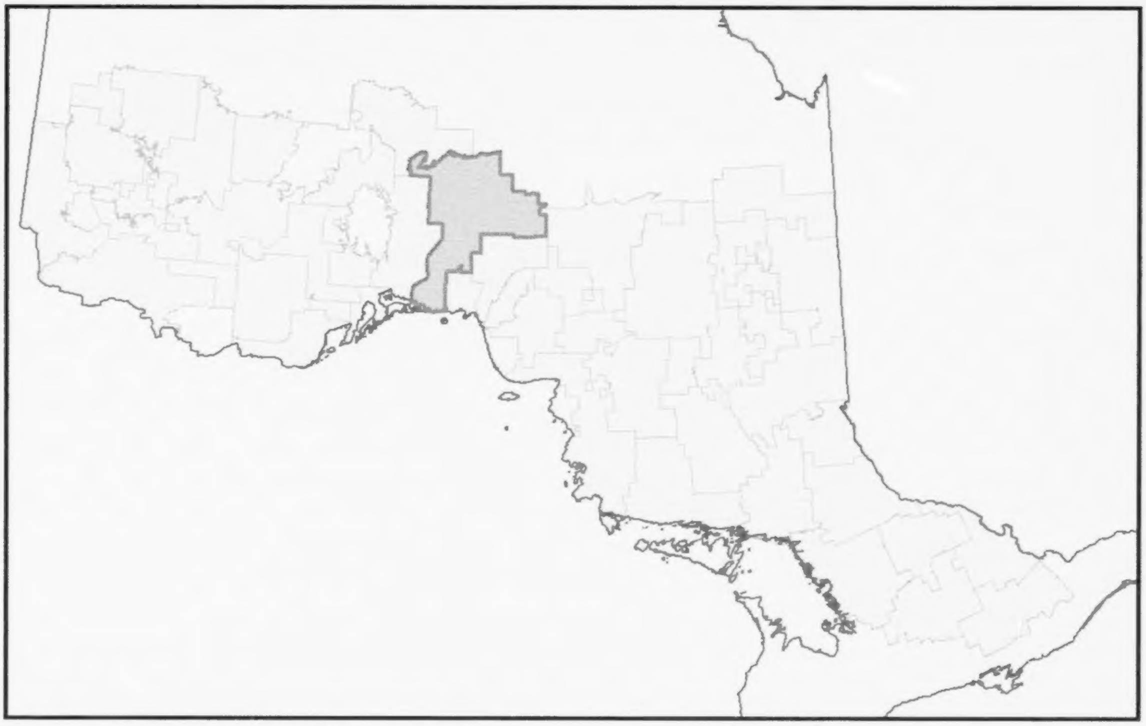

FIGURE 1. LOCATION OF THE KENOGAMI FOREST IN THE PROVINCE OF ONTARIO
Source: OMNR

The Forest encompasses a total area of 1,976,961hectares (ha). Of this, 1,860,768 ha (94%) is Crown Managed land. Table 2 provides an area summary of the managed Crown land by type.

TABLE 2. AREA SUMMARY OF MANAGED CROWN LAND BY LAND TYPE

Managed Crown Land Type	**Area (Ha)**
Unsurveyed	1,607
Non-Forested	167,258
Non-Productive Forest	127,987
Protection Forest[2]	109,330
Production Forest[3]	
Forest Stands	1,214,017
Barren & Scattered	45,531
Depleted	195,037
Total Forested:	1,691,902
Total Crown Managed:	1,860,768

Source: FMP-1 Table: Management Unit Land Summary in Hectares (2010 Contingency Plan)

Forest Cover Types

The Kenogami Forest is a typical, fire-driven boreal forest ecosystem. Historic wildfires and human fire suppression activities have affected the age class area distribution and to a lesser extent the species composition.

The Forest is predominately a coniferous forest comprised mainly of spruce dominated forest units which occupy approximately 67% of the production forest land base. The other dominant species are poplar and jack pine which occur either in pure stands or mixed associations. Balsam fir, white birch, larch and cedar occur less frequently. Figure 2 presents the proportional representation of forest cover types.

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[2] Protection forest land is land on which forest management activities cannot normally be practiced without incurring deleterious environmental effects because of obvious physical limitations such as steep slopes and shallow soils over bedrock.

[3] Production forest is land at various stages of growth, with no obvious physical limitations on the ability to practice forest management.

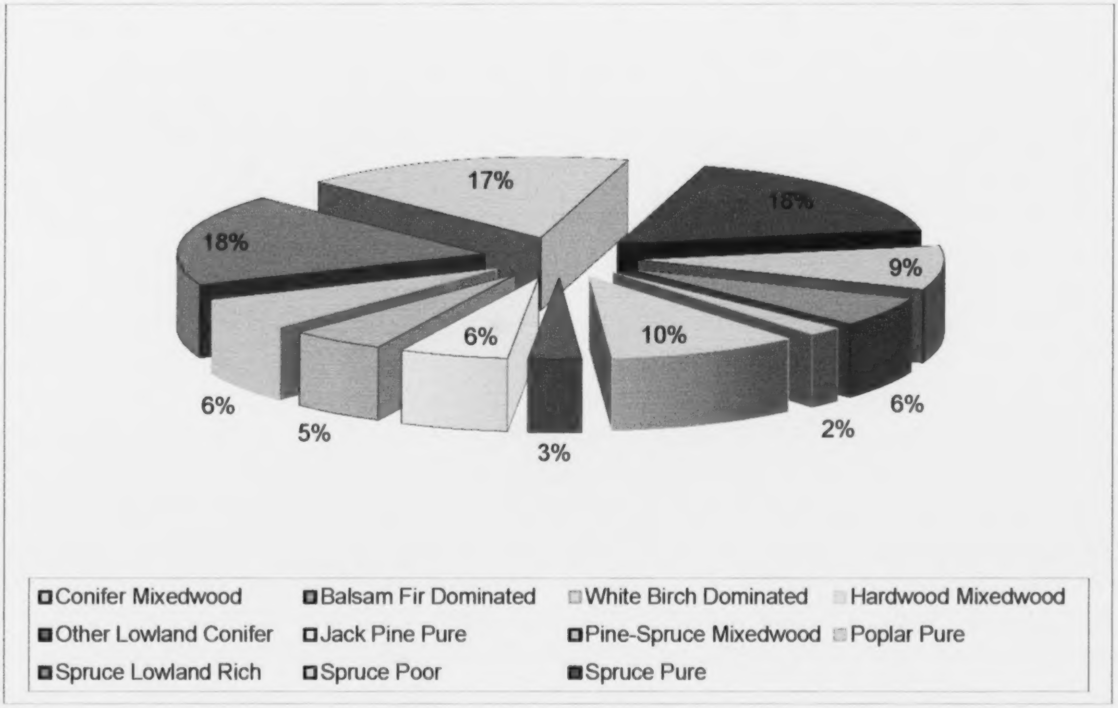

FIGURE 2. PROPORTIONAL REPRESENTATION OF FOREST COVER TYPES ON THE KENOGAMI FOREST
Source: 2005 FMP

Age Class Area Distribution

The age class area distribution is skewed to the 0-20 age class and to a lesser extent to mature and over mature age classes. An age class area gap also exists in the 41-60 year age class (Figure 3). The identified age class area gap may result in future wood supply issues, a lack of habitat for some wildlife species and difficulties in achieving old growth area targets.

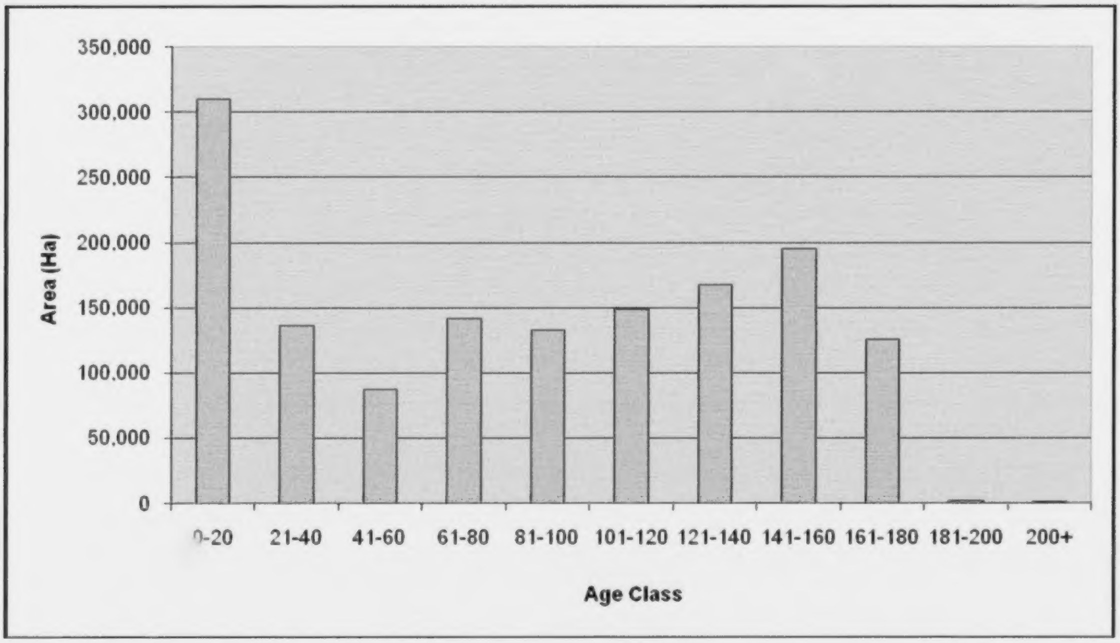

FIGURE 3. AGE CLASS AREA DISTRIBUTION BY COVER TYPE.
Source: 2005 FMP

The Forest provides a predominately coniferous forest habitat for many wildlife species that are common to the boreal forest. Species categorized as endangered, threatened or of special concern that are known to occur, or thought to have occurred, are Woodland Caribou, Eastern Cougar[4] , American White Pelican, Wolverine, and Bald and Golden Eagles.

Approximately one third of the Forest is managed for caribou habitat. The caribou guidelines require the establishment of large long-term habitat tracts for Woodland Caribou. The caribou mosaic delineates conifer-dominated landscapes into large (>10,000 ha) areas and provides specific direction regarding locations (mosaic blocks) that can be harvested, and locations that must be deferred in twenty year time periods in order to fulfill the habitat requirements.

Moose have been designated as the featured ungulate species on approximately 67% of the Forest. Moose are of significant economic importance for First Nations as well as commercial and resident sport hunting. Other wildlife species include Black Bear, Beaver, Mink, Red Fox, Lynx, Snowshoe Hare, Ruffed Grouse, Spruce Grouse, Sharp-tailed Grouse and waterfowl.

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[4] Although no sightings have been reported on the Forest, observations have been reported on adjacent SFLs.

3.3. Current Issues

SFL Transfers and Strike

During the audit term (2005-2010) there was a significant downturn in the economy. The Long Lake and Nakina sawmills were idled, Longlac Wood Industries Inc. (LWI) permanently closed the waferboard and plywood mill in Longlac, and the Terrace Bay pulp mill was shut down and subsequently sold to the Buchanan Group of Companies.

Due to these factors, the 2005-2010 FMP was not fully implemented. In January 2006, woodland employees of Neenah Paper Company of Canada Ltd. went on strike and all harvest operations ceased. Other third party operators also ceased operations in as a result of the strike. With the woodlands employees still on strike, the Terrace Bay mill was closed in June of 2006. The Terrace Bay pulp mill was sold and the SFL was transferred from Neenah Paper to Terrace Bay Pulp Inc. in August 2006. After the transfer, no harvesting took place until mid-November. While the labour dispute was ongoing woodland operations were scaled down until January 2007.

Due to market issues, winter harvesting operations were curtailed from February 2008 to May 2008, and again in February 2009. The shutdown in 2009 was also accompanied by the closure of the pulp mill and the TBPI obtaining Companies' Creditors Arrangement Act (CCAA) protection. This closure resulted in a shutdown of all harvest operations in February, 2009. In total, approximately 32 months of harvesting activities were lost due to financial difficulties and the labour dispute. In the fall of 2010, TBPI exited creditor protection and re-opened for business.

Implementation of the Forest Management Guidelines for Caribou Conservation

The caribou mosaic is the overriding consideration affecting forest management decisions and long-term management objectives on approximately one third of the Kenogami Forest. The objective of the mosaic strategy is to ensure suitable and sustainable year-round caribou habitat. This requires forest planners to develop a habitat mosaic which emulates natural disturbances and landscape patterns. The mosaic dictates the amount of area and locations where harvesting can occur for a particular period of time.

Age Class Area Distribution

The existing age class distribution of the Forest poses challenges with respect to the decreased supply of habitat for some wildlife species and achievement of future old growth area targets.

Forest Resource Inventory (FRI)

A contingency plan was required as delays in the production of a new digital FRI delayed the preparation of the 2010-2020 FMP. The original 1988 inventory was deficient largely due to stand volume and composition changes resulting from spruce budworm infestations in the late 1980s and early 1990s. The forest inventory has not been updated to reflect recent harvest activities due to staff reductions and economic difficulties that BFPL experienced prior to its bankruptcy. During the 2005-2010 FMP term, actual volumes realized have been approximately 20% below forecast levels.

Wood Utilization

Most of the northwest region is experiencing weak and/or unpredictable markets for poplar and other hardwood species. The lack of available markets, mill closures, the SFL transfer, bankruptcies and mill volume requirement reductions resulted in a large volume of timber being left in the bush.

Forest Access

Local stakeholders have expressed a desire to maintain roads in order to ensure continued road-based use by anglers and hunters. Conversely, there is also a desire to restrict development of road based-tourism and recreation, in order to protect existing remote-based tourism interests. Although the majority of the roads have access restrictions, the perception of the remote-based tourism community is that any access will negatively impact their businesses. The decommissioning of access is an important component of the caribou mosaic strategy. Depending on the strategy adopted costs of road decommissioning and rehabilitation can be significant.

3.4. Summary of Consultation and Input to the Audit

Details on public consultation and input are provided in Appendix 4. Public notices and an invitation to provide comments and/or complete a survey on the Arbex website were placed in the Times Star (Geraldton) and the Wawatay News. A random sample of 35% of the individuals and organizations listed in the 2010 Contingency FMP mailing list were sent a letter and a survey questionnaire requesting input to the audit process. Four responses were received.

All First Nations (FNs) with an interest in the Forest were contacted by mail with an invitation to participate and/or express their views on the management of the Forest during the audit term. Follow-up contacts were made with all FNs and interviews were held with some FN representatives.

A member of the audit team attended a Geraldton Area Natural Resources Advisory Committee (GANRAC) meeting, and the GANRAC members participated in the field audit. GreenForest Management Inc. staff (representing TBPI), Buchanan Wood Industries (BWI) and OMNR staff with responsibilities on the Forest participated fully in the field audit and/or were interviewed by the audit team. Individual interviews were held with three resource-based tourism operators.

4.0. Audit Findings

4.1. Commitment

The commitment principle is deemed to be met since during the audit term TBPI was certified under the Sustainable Forestry Initiative (SFI) certification standard. The certification extends to December 18, 2012.

4.2. Public Consultation and Aboriginal Involvement

Standard Public Consultation

Public consultation for the 2010 Kenogami Contingency Plan was consistent with the requirements of the 2004 FMPM. There were eleven formal public comments and the OMNR and SFL holder responses were complete and timely.

Issue Resolution

During the preparation of the Contingency Plan and minor amendments, opportunities for concerned person(s) to identify issues were clearly identified. There were no Issue Resolution or Individual Environmental Assessment requests.

Local Citizens Committee

The Geraldton Area Natural Resources Advisory Committee (GANRAC) has been active in providing a local perspective on numerous natural resource planning and management activities that includes fisheries and wildlife, as well as forestry.

It is a large committee, with 18 members and a similar number of alternates, involved in the development of the 2005 FMP and 2010 Contingency Plan. A full range of community interests were represented and attendance at meetings was consistently high. Aboriginal participation has been minimal despite numerous efforts to encourage their involvement.

The Committee has a number of experienced members who have participated in the development and implementation of several forest management plans. For the development of the 2010 Contingency Plan two GANRAC members participated on the Planning Team.

The Committee was fully involved in the implementation of the 2005 FMP. Committee agendas and minutes show ongoing involvement with the provision of advice and comment on Annual Work Schedules, Compliance activities, road construction, etc.

Members expressed a high level of satisfaction with the OMNR and the forest industry efforts to keep them informed and involved in all aspects of forest management.

Aboriginal Involvement in Forest Management Planning

There are six aboriginal communities with an interest in the Kenogami Forest. These are the Pays Plat First Nation, Ginoogaming First Nation, Long Lake Reserve 58 First Nation, Aroland First Nation, Animbiigoo Zaagi'iging Anishinaabeck (AZA) and the Constance Lake First Nation.

Our assessment is that IFAPP requirements related to Aboriginal consultation and involvement in the planning process had been met. The OMNR met all FMPM Aboriginal notification requirements and deadlines with respect to the 2010 Contingency Plan. All six First Nations identified representatives to participate in the development of the Plan and four First Nations participated in the first meeting. That participation decreased as the planning process proceeded.

Aboriginal Background Information Reports and Community Demographic Profiles from the previous FMP were updated where possible. Values maps were updated.
All FNs received invitations to develop individual consultation programs but after initial expressions of interest the standard consultation approach was eventually adopted. While there was minimal community participation, all FMPM notification requirements were met.

4.3. Forest Management Planning

This audit investigated the planning process related to the development of the 2010 Contingency Plan (CP)[5]. The Planning Team opted to prepare a contingency plan less than two years after the approval of the 2005 FMP due to a delay in the planning inventory production associated with the new digital FRI. We note that it is not yet apparent that the 2011 FMP will meet scheduled approval deadlines due to continuing issues with the production of the planning inventory.

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[5] The CP was developed to the extent possible using the 2004 Forest Management Planning Manual (FMPM) but remained consistent with the strategic direction of the 2005 FMP which was prepared in accordance with the requirements of the 1996 FMPM.

The CP was approved four months later than the Plan Proposal schedule but otherwise the CP met FMPM requirements. The 2005 FMP strategic direction applied caribou habitat guidelines to approximately 1/3 of the Forest while the wildlife habitat emphasis on the remaining 2/3 was to "*maintain a continuous supply of marten habitat both geographically and spatially across the landscape*".

Our assessment is that the SFL holder had implemented the caribou mosaic strategy in accordance with the provincial policy direction. The caribou mosaic strategy was implemented northwest of Highway 11, with the area being partitioned into five sets of mosaic sub-units managed on a 100 year rotation. The caribou mosaic harvest schedule maintains long-term caribou habitat, with the blocks being approximately equal in area and containing a balance of forest units, and operable area. Operations for the remaining two thirds of the Forest were guided by the 2005 FMP stand eligibility and selection criteria. The Silvicultural Ground Rules (SGRs)[6] and Silvicultural Treatment Packages[7] (STPs) were appropriate for the forest types present.

The CP available harvest area (AHA) was equivalent to one year of the 5 year harvest area determined in the 2005 FMP. This circumstance required that we examine the SFMM modeling for the 2005 FMP in order to provide comment on the strategic direction of the contingency plan. The selected management strategy was supportive of forest sustainability and we found that the planning to support the strategy was well done. The planning team developed realistic yield curves that incorporated budworm mortality to enhance the accuracy of the long term sustainability calculations. The planning team also developed criteria which delineate black spruce stands as "lowland poor", "lowland rich" and "upland". This approach provides for a more precise delineation of spruce types and will improve long term sustainability calculations and operations planning.

We identified some issues with respect to 2005 SFMM modeling that included:

- the inclusion of patent land in SFMM model and objective achievements,
- the assumption of 100% renewal of barren and scattered areas,
- SFMM areas and areas reported in the FMP tables did not match in all instances,
- Issues with respect to the use of silvicultural intensity codes.

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[6] The Silvicultural Ground Rules were developed according to the Silvicultural Guide to Managing for Black Spruce, Jack Pine and Aspen on Boreal Ecosites in Ontario. These rules specify the silvicultural systems and types of harvest, renewal and tending treatments that are available to manage forest cover and the type of forest that is expected to develop over time.

[7] A Silvicultural Treatment Package is the path of silviculture treatments from the current forest condition to the future forest condition. STPs include the silvicultural system, harvest and logging method(s), renewal treatments, tending treatments, and regeneration standards.

We provide a recommendation to address these issues (Recommendation # 1 – Appendix 1).

Area of Concern (AOC) and access planning met FMPM requirements.

While the OMNR Socio-Economic impact model (SEIM) provided some useful information for the assessment of FMP objectives and forest sustainability, we question the usefulness of some of the analyses (e.g. the 2005 and 2010 Plans' analyses attempted to correlate economic activity with 8 categories of criminal behaviour in Nipigon District) and provide a recommendation (Recommendation # 2 - Appendix 1) to address this concern.

4.4. Plan Assessment and Implementation

Harvest

During the 2005-2010 FMP term, the actual annualized harvest area achieved approximately 46% of the planned (annualized) harvest targets. This low harvest reflects the economic downturn in the forestry sector, the closures of destination mills, and the prolonged labour dispute. The limited salvage harvesting that occurred during the audit term was appropriately planned and implemented.

Volume utilization was approximately 48% of what was planned reflecting the lower than forecast harvest. Most of the harvest volume consisted of jack pine and spruce. Poplar utilization was well below planned levels due to limited markets and the closure of Longlac Wood Industries (LWI) and TBPI.

Harvest volumes were generally lower than forecast due to volume losses arising from past spruce budworm infestations and optimistic yield curve projections for some forest units.

We visited approximately 41% of the area harvested during the audit term. All inspected sites were approved for operations in Annual Work Schedules (AWS) and harvest prescriptions were implemented in accordance with the SGRs. All harvest operations occurred under Overlapping Licence Agreements with TBPI. Operations were properly implemented as demonstrated by the low number of Not-in-Compliance reports.

We did observe a limited number of Careful Logging Around Advance Growth (CLAAG) prescription sites where the density and distribution of seed trees was low. As this problem was not systemic we do not provide a recommendation.

Merchantable wood was utilized to the extent possible given market conditions. Harvested underutilized species (white birch, trembling aspen, balsam poplar, larch, cedar) were to be forwarded to the roadside, scaled for Crown dues, and left in a marketable and accessible form for future utilization. In some instances, hardwoods were merchandized for product or were left standing in anticipation that they would be felled in a second pass operation should market conditions improve (e.g. a maximum of 40 residual trees within cut blocks was permitted)[8].

There has been an on-going issue with respect to wood utilization on this Forest. The 2005 IFA provided a recommendation to address utilization and the reporting on wood left in the bush. We found that utilization and reporting problems persist and have been exacerbated as a result of the 2006 labour dispute at Neenah Paper, the SFL transfer from Neenah Paper to TBPI, the bankruptcy of BFPL, and the CCAA status of TBPI. The presence of this unutilized timber is a significant public concern as wood rotting in the bush is perceived as improper forest management and a wasteful practice with respect to the utilization of a public resource. This timber continues to lose market value as issues related to liens, ownership and obligations with respect to payment of Crown dues are addressed in the courts and by the CCAA appointed Receiver.

We also found shortcomings with respect to the tracking and monitoring of this wood and provide a recommendation (Recommendation # 9 – Appendix 1) to address this concern. Based on interviews and the review of a court document the volume of unutilized timber is estimated to be 245,801 m^3. This estimate is based on the following:

- An OMNR and Company spreadsheet indicates that 57,929 m^3[9] (45,187 m^3 conifer and 12,742 m^3 poplar) remains in the bush since the transfer of the SFL from Neenah Paper to TBPI. The poplar volume is believed to be in an unmarketable condition as a result of deterioration; the conifer volumes may have some market potential as pulp. It is our understanding that the Crown dues on the "Neenah" wood have not been paid and a recommendation is provided (Recommendation # 10 – Appendix 1).

Court file no. CV-09-8-062-00CL indicates the following;

- In September 2010, TBPI agreed to purchase (from the Receiver) 87,182 m^3 (6,629 m^3 hardwood and 80,553 m^3 conifer) of the unutilized timber harvested by LLFP (Schedule B – Term). A bill for Crown dues owing has been submitted by the Crown to TBPI for this wood but these dues remain outstanding. A further decision on the purchase of an additional 13,724 m^3 hardwood and 51 m^3 of conifer is pending (by March 11, 2011 (Schedule E). Both OMNR and TBPI must agree on any negotiated purchase arrangement.
- In addition to the wood harvested by LLFP, Crown dues are also outstanding on harvested wood left in the bush by third party contractors.

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[8] The NDPEG require that 25 trees be retained per hectare within cutovers.

[9] There is a discrepancy in the total volume of wood reported in the OMNR Neenah Paper Inventory List spreadsheet provided (55,888 m^3 vs. 57,029 m^3).

> This wood is subject to unsecured liens and at the time of the audit there were no arrangements in place to facilitate the transfer from the Receiver to TBPI. This volume amounts to 86,915 m^3 (60,950 m^3 conifer and 25,965 m^3 of hardwoods) (Schedule D) which is listed as BFPL and Neenah inventory. There is no arrangement for the payment of Crown dues on this volume (Recommendation # 11 – Appendix 1).

The caribou management strategy requires creation of larger forest disturbances (i.e. greater than or equal to 10,000 hectares in size); however this objective is somewhat in conflict with the requirement to comply with the *Forest Management Guide for Natural Disturbance Pattern Emulation* standard that 80% of planned clearcuts should be less than 260 hectares. Due to the curtailment of harvest operations during the 2005 FMP term there has been an increase over planned projections in the number of smaller harvest blocks (83% of cuts were smaller than 260 hectares).

Based on the low levels of harvest achievement and other issues related to the age class area distribution we question whether or not the plan objectives for caribou habitat creation can realistically be achieved (See Section 4.7).

Renewal, Tending and Protection

We sampled 10% of renewal and site preparation activities. All inspected activities were approved in the AWSs and were in accordance with the applicable Silvicultural Ground Rule (SGR) and Silvicultural Treatment Package (STP).

Renewal targets for 2005-2010 were achieved (98%) and the area treated by artificial renewal was considerably higher than planned (111%) due mostly to a large tree plant which occurred in 2009-2010 where over 10 million seedlings were planted. The total area renewed was generally in balance with the area harvested for the audit term.

Renewal sites were generally well-stocked to the target species and the renewal program was generally effective. However, we did observe some localized problems with respect to the quality of planting stock and supervision of tree planting operations from 2007-2009:

- Stocking density in areas that were planted with "held over" planting stock due to the labour dispute was low as a result of seedling mortality.
- Tree planting operations on unscarified areas may require better supervision and monitoring as we noted spacing issues on these sites.
- There was evidence of poor microsite selection for tree planting in some areas.

We provide a recommendation to address issues associated with tree planting quality (Recommendation # 3 – Appendix 1).

The curtailment of operations due to the labour dispute, mill closures and a lack of funds in the Forestry Renewal Trust Fund[10] resulted in less mechanical site preparation and tending than was planned, with no operations occurring in 2009-2010.

The site preparation that did occur was effective and we did not observe any evidence of environmental damage. The tending program was effectively delivered although there was an issue with respect to chemical efficacy on a limited number of sites. No pest protection activities occurred during the audit term.

Slash burning was not undertaken during the audit term. Piling, rowing and corridoring of slash was undertaken to expose areas of mineral soil. This approach provided for renewal treatments while retaining roadside slash for biofuel collection should such opportunities become available. In the absence of burning or biofuel production it was felt by the planning team that the relatively smaller debris piles would decompose more quickly than the traditional "beehive" piles. Our field inspections indicate that the slash management program, as implemented, appears to be effective in reducing the area of productive forest land lost to logging debris.

Our field assessment of areas assessed for FTG indicated that required stocking levels had been achieved. A backlog in area requiring free-to-grow surveys exists (approximately 64,943 ha of which 37,472 are harvest depletions and 27,471 ha are areas of natural disturbance). The SFL holder is obligated to survey harvest depletions for FTG status and assess the status of natural disturbances for entry into the FRI. There is also a requirement to survey Z classification lands[11] for FTG status and tending requirements on 253 ha. A recommendation (Recommendation # 8 – Appendix 1) to address the requirement for FTG and Z land surveys is provided.

Access

Forest access (including water crossings) was well planned and constructed in accordance with the FMPs, AWSs and forest management guidelines. As a result of the prevailing economic conditions and the labour dispute only 26% and 49% of planned primary and branch road construction occurred. The forest access compliance record was good. Our inspections of Category 9 and forestry aggregate pits for compliance with the "*Aggregate Resources of Ontario Provincial Standards*" found there were no non-compliances.

We encountered an issue with respect to a variance between the number of kilometres (kms) of road construction reported in the Annual Reports and the amount of road construction reported and invoiced in the "*Forest Roads and Maintenance Agreement*

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[10] The deficit was due to lower harvest volumes and late payments to the FRT.

[11] Z lands are areas harvested prior to April 1, 1995, scheduled for natural renewal which had no eligible silviculture work initiated using funds from the SPA or FRT but on which a tending treatment may be required to bring to FTG.

(FRMA)". We provide a recommendation (Recommendation # 4 – Appendix 1) to address the issue.

We also identified other issues related to access. These included:

- Although monitoring was occurring on active roads, a formal road monitoring program had not been implemented. As a result, the current roads monitoring program is not tracking the status of all roads for which TBPI has responsibility. We provide a recommendation (Recommendation # 5 – Appendix 1) to address this concern.
- We noted localized problems related to nuisance beaver activity. Nuisance beaver control issues have been exacerbated by staff turnovers and layoffs, and Aboriginal rights issues. With the return to more stable woodland operations a resolution of this problem can reasonably be expected, so we do not provide a recommendation.

Renewal Support

The level of renewal support for seed collection, nursery stock production and tree improvement work was sufficient for the scale of the renewal program.

4.5. System Support

Human Resources

The IFAPP human resources principle is deemed to be met since the Kenogami Forest was certified by the Sustainable Forestry Initiative (SFI) during the audit period. Industry staff layoffs and the 2006 labour dispute significantly affected the delivery of silviculture and SFL contractual obligations. While OMNR staffing levels were deemed satisfactory to meet current obligations, SFL holder staffing will need to increase with the resumption of operations.

Document and Record Quality Control

During the BFPL bankruptcy and the SFL transfer a number of paper files were removed from filing cabinets and left in some disarray throughout the old Neenah Paper office in Longlac. This resulted in delays in locating some documents requested by the auditor team. GreenForest staff was working to re-file and re-catalogue these documents and records so we do not provide a recommendation with respect to document control.

GreenForest is utilizing a record filing, documentation control systems and an Environmental Management System (EMS) developed by Buchanan Forest Products Limited. This record control system is sophisticated and the EMS ensures documents are managed appropriately with a back-up process in place. Forest certification requirements also include a requirement for the maintenance of a quality document and record control system.

The OMNR maintains a good quality record and document control system.

4.6. Monitoring

District Compliance Planning and Associated Monitoring

District compliance planning was completed on an annual basis that included targets and identified individuals responsible for completing the work. During the audit period the OMNR carried out 92 inspections (spot-checks and audits) and reported 7 instances of non-compliance. The non-compliances reported were minor in nature. The number of inspections completed was appropriate for the level of harvest activity.

We completed a random review of inspection reports submitted during the audit term and they generally conformed to the *Forest Compliance Handbook (2008)* requirements.

The 2005 IFA recommended greater attention to the timely submission of inspection reports. While there were still some delayed report submissions there was a significant improvement over the audit period. Our assessment is that OMNR staff demonstrated a commitment to ensuring continued improvement.

SFL Holder Compliance Planning and Monitoring

Both the 2005 FMP and 2010 Contingency Plan had strategic compliance plans as required by the *Guidelines for Forest industry Compliance Planning (2005)*.

Three hundred and seventy-one compliance inspections were conducted by industry over the term identifying 6 instances of non-compliant activities. Infractions reported were minor. Our assessment is that the number of inspections was appropriate for the level of harvest activity.

The 2005 IFA identified a number of issues associated with the completeness and timely submission of inspection reports. During this audit there were issues associated with the transfer of the SFL from the Neenah Paper Company to Terrace Bay Pulp Inc. where blocks had been “suspended with comments”. Unresolved employee issues and the strike (2006 period) also contributed to the Companies problems associated with "catching up" with operations. However, over the audit period, the Company and OMNR had systematically inspected those suspended areas and addressed outstanding issues.

Issues associated with late submission of inspection reports described in the 2005 IFA showed significant improvement over this audit period.

OMNR Silvicultural Effectiveness Monitoring (SEM)

The OMNR silvicultural effectiveness monitoring program (SEM) consisted of free-to-grow surveys of areas declared FTG in 2002 and 2005. We have a concern with the inconsistencies between SFL Holder and OMNR reported "silvicultural success" vs. "regeneration success"[12]. This issue is discussed in Section 4.8.

4.7 Achievement of Management Objectives & Sustainability

The objectives, targets, and strategies for the 2010 Kenogami Contingency Plan were adopted directly from the 2005 Kenogami FMP, thus our analysis principally focused on the achievement of the 2005 FMP objectives (See Appendix 2). The 2005 and 2010 planning processes provided management direction consistent with meeting objectives related to the maintenance of biological diversity. Social and economic objectives however are generally not being met, due principally to a reduction in forest harvesting to approximately 50% of planned levels resulting in major impacts on industries and communities.

Objectives for the provision of forest cover and related values are generally being met, however the achievement of some of the targets including those related to caribou management, are in jeopardy, mostly due to the reduction in forest harvesting. Silvicultural objectives are being partially met; problem areas include discrepancies between the determination of silvicultural and regeneration success and stocking achievement, and a backlog in Free-to-Grow assessments.

GreenForest prepared a "*Comparison and Trend Analysis of Planned vs. Actual Forest Operations Report*" on behalf of the SFL holder. The report was prepared in accordance with the requirements of the 2010 IFAPP and the 2009 FMPM. The report assessed emerging trends over the 1990-2010 period. Difficult economic circumstances (SFL transfer, curtailment and closure of mills, and labour disruption) all significantly contributed to plan objectives and targets not being realized in the 2005-2010 term. Additionally, as a result of economic difficulties at BFPL and subsequent staff reductions, the forest resource inventory was not updated for harvest activities in the current term. The following trends are reported:

- The achievement of harvest area targets has fluctuated over the three management terms (54% of planned in 1990-95, 74% of planned in 1995-

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[12] Regeneration is considered to be a silvicultural success when the standards contained in the Silviculture Ground Rules (SGRs) have been attained and the depleted area is regenerated to the projected forest unit. A regeneration success is declared when depleted areas are renewed to another forest unit.

2000 and 2000 – 2005, and 46% of planned in 2005-2010). The historic underachievement of the harvest target is largely attributed to fluctuating market conditions. In the current term, mill curtailments and closures and the labour dispute resulted in a 32 month disruption of harvest activities.

- Harvest volume parallels the trend in harvest area (84% of planned volume realized in 1995-2000, 67% in 2000-2005 and 48% in 2005-2010). Spruce and Jack pine were the most consistently harvested species. Stand volumes have been lower than predicted in FMPs largely due to insect damage and mortality. Yield curve estimates were optimistic for 2005-2010.
- As a result of the reduction in harvest area, renewal targets were also underachieved over the past three management terms (77%, 81% and 98%).
- Mechanical site preparation occurred on only 39% of the area planned in the 2005-2010 term. This was due to the reduction in harvest area, the results of site inspections and a lack of funds in the Renewal Trust Fund. Tending treatments and pre-commercial thinning targets were also not achieved due to reductions in harvest area and on-the-ground conditions.
- Regeneration treatments were also more selective toward natural regeneration which reduced tending requirements.
- The harvest disturbance area trended to smaller block sizes during the 2005-2010 FMP term as a result of the labour dispute and economic conditions that resulted in blocks only being partially harvested.
- Eighty-five percent of the harvest area was successfully regenerated between 1995 and 2000.
- Forty-five percent of the harvest area was renewed from 2005-2010. Regeneration surveys were conducted on 54,874 ha. Eighty-eight percent of the areas surveyed was successfully regenerated and 75% of the area surveyed was declared as a silvicultural success. In 2009-10, 1,019 hectares were surveyed with 90% of this area being declared as a silvicultural success. The remaining 10% was declared a regeneration success.

The Trends Report Author concluded that the reported trends are not a detriment to forest sustainability. We agree with this assessment.

Based on our audit findings, we conclude that Forest sustainability is being achieved, as assessed through the Independent Forest Audit Process and Protocol. This conclusion is premised on the following achievements:

- The long term management direction in the 2005 FMP (and 2010 Contingency Plan) and their related management objectives are consistent with the attainment of forest sustainability.
- Appropriate information was available to support forest management planning efforts and in instances where there were information shortfalls appropriate measures had been enacted to address the shortcoming(s).
- Forest management planning adhered to FMPM requirements.
- Appropriate silvicultural ground rules were adopted and the silvicultural treatment packages were appropriate for observed field conditions.
- Areas of Concern were appropriately protected through proper planning and management prescription implementation.
- Forest management activities (e.g. harvest, renewal, tending) adhered to FMP requirements. Field operations were implemented with minimal environmental degradation.
- Renewal operations are generally in balance with harvest operations.
- Forest operations were compliant with the Crown Forest Sustainability Act (CFSA), Forest Management Plans and approved manuals.
- None of the reported trends in the Comparison and Trend Analysis of Planned vs. Actual Forest Operations Trends Report indicates an imminent threat to forest sustainability.

However, we have identified some concerns:

- While the SFL holder has implemented the caribou mosaic in accordance with the provincial policy direction, we are concerned that forecast caribou habitat creation objectives may not be achievable if the harvest continues to remain below planned levels
- There are major discrepancies with respect findings related to silvicultural and regeneration success between the OMNR data reported in SEM reports and those reported by the SFL holder in Annual Reports. These discrepancies complicate the assessment of forest sustainability and forest cover objectives as they relate to biodiversity and suitable caribou habitat conditions.
- An estimated 245,801 m^3 of unutilized wood has been left in the bush. A significant portion of this wood was harvested prior to the audit term and has deteriorated to the extent that it likely unmarketable for use other than biofuel. Crown dues and Trust payments are outstanding on this timber.

4.8. Contractual Obligations

Appendix 3 provides a general overview of the SFL holder's adherence to its licence obligations. In general, as a result of the economic downturn, mill closures, the transfer of the SFL and the labour disruption several contractual obligations were not met. Contractual non-compliances included:

- Forestry Futures Trust, Ontario Crown dues and Forest Renewal Trust payments are in arrears.
- A contractual obligation to survey Z category lands (253 hectares) remains outstanding and there is a backlog in the area requiring FTG survey.
- The Action Plan and Status Report for the 2005 IFA were submitted late (Recommendation # 12 – Appendix 1).
- An estimated 245,801m^3 of harvested wood remains unutilized.
- The FRI was not updated for harvest depletions during the audit term.
- The Minimum Balance was not maintained for 3 years of the audit term.

We provide a discussion of these shortcomings in meeting contractual obligations in Appendix 1.

Despite meeting the initial reporting requirement deadline, most ARs required re-submissions to meet FIM or FMPM requirements/standards.

We also note that, there are major discrepancies with respect to findings related to silvicultural success between the OMNR data reported in Silvicultural Effectiveness Monitoring Reports and those reported by the SFL holder in Annual Reports. These issues are discussed in Appendix 1 and we provide two recommendations (Recommendations # 6 & 7- Appendix 1).

The 2005 IFA recommended that "*the MNR and Neenah Paper, in cooperation with Tembec resolve the wood supply commitment to Tembec, Hearst, in Appendix E (Condition #4) of the SFL*". The parties have not entered into a MOA as required by Condition 4 and the commitment appears to be unnecessary to the operation of either facility. We recommend that this wood supply commitment be removed from Appendix E of the SFL (Recommendation # 13 – Appendix 1).

4.9. Conclusions and Licence Extension Recommendation

Our assessment is that forest sustainability is fundamentally being achieved on the Kenogami Forest as assessed through the IFAPP. Undoubtedly, the full implementation of the 2005 FMP and 2010 CP was negatively impacted by the economic downturn in the forest sector, mill closures, staff layoffs and the transfer of the SFL. The labour dispute at Neenah Paper also negatively impacted the achievement of harvest and silvicultural targets, and the meeting of SFL requirements and obligations during the audit term. We provide thirteen recommendations to address shortcomings and to improve the delivery of the forest management program on the unit.

We are concerned that a persistent underachievement of planned harvest levels may jeopardize caribou habitat creation targets. Issues with respect to data discrepancies in the silvicultural standards assessment program complicate the assessment of forest sustainability as it relates to biodiversity, and forest cover objectives related to the caribou strategy.

A significant concern for the audit team is the large volume of unutilized timber in the bush on which Crown dues are outstanding. The inventory of wood stranded in the woods was a significant concern reported by both the public and OMNR staff during this audit. It is estimated that 245,801 m^3 of harvested timber remains in the bush. A portion of this wood was harvested in the previous audit terms, and has deteriorated to the extent that it is likely unmarketable for use other than as biofuel. Crown dues and Trust fund payments remain outstanding for this timber.

The audit team spent considerable time deliberating whether to recommend conditionally extending or not extending the SFL for a further five years. In our deliberations we recognized the particularly difficult circumstances related to the economic downturn in the forest sector (i.e. transfer of the SFL and management responsibility, mill curtailments and closures, cessation of harvest activities) and their significant contribution to the inability of the SFL holder to meet its contractual obligations related to wood utilization and Trust and Crown dues payments. Many of the other shortcomings identified in the audit were directly attributable to the prolonged labour dispute and/or staff reductions as the industry downsized. Had these circumstances not been in play we would have elected to recommend the license not be extended.

Other factors that influenced our decision on the licence extension were:

- During the audit term, most FMP objectives were met.
- The Ontario Government in its role as administrator of the Forest was cognizant of wood utilization issues and the status of Trust and Crown dues payments but did not fully address them.
- Issues related to liens, ownership and obligations with respect to the payment of outstanding balances are being addressed in the courts and by the CCAA appointed Receiver.
- TBPI has exited creditor protection (with support from the Ontario government) and we observed tangible evidence of efforts by the SFL

holder and the new forest management service provider to positively address the major shortcomings in forest management performance.

Given the foregoing, we concluded that a conditional licence extension was warranted and provide the following recommendation:

We conclude that with the critical exceptions noted below, management of the Kenogami Forest was generally in compliance with the legislation, regulations and policies that were in effect during the term covered by the audit, and the Forest was managed in compliance with the terms and conditions of the Sustainable Forest Licence held by Terrace Bay Pulp Inc. Forest sustainability is being achieved, as assessed through the Independent Forest Audit Process and Protocol. The critical exceptions are as follows:

- An estimated inventory of 245,801 m^3 of harvested and unutilized timber is present on the unit.
- Forestry Futures Trust, Ontario Crown dues and Forest Renewal Trust payments are outstanding.

Therefore, the audit team recommends the Minister extend the term of the Sustainable Forest Licence # 542256 for a further five years, only on confirmation that the following conditions have been satisfied:

- The SFL Holder and the OMNR need to determine what portion of the unutilized Neenah Paper wood is marketable and agree on a strategy for its utilization within six months of the submission of the Audit Report.
- The SFL holder work with the OMNR/MNDMF to develop a plan within six months of the submission of the Audit Report for the payment of Forestry Futures Trust, Ontario Crown Dues and Forest Renewal Trust payments which are outstanding as of March 31, 2011.

Appendix 1

Recommendations

Independent Forest Audit – Record of Finding

Recommendation # 1

Principle: PRINCIPLE 3; FOREST MANAGEMENT PLANNING

Criterion: 3.3 Management Unit Description
3.4.1 Proposed Long-Term Management Direction

Procedure(s):

3.3.2.2. Classification of lands by land ownership and land types
3.4.1.2. FMP achievement of the Checkpoint 'Support for Base Model'

Background Information and Summary of Evidence:

SFMM has 1,402,169 ha of available forest 41,921 ha of ownership reserve (patented land), and 7,344 ha of AOC reserves for a total available and reserved forest of 1,451,433 ha. This increases to 1,496,882 ha when barren and scattered land is included (45,449 ha). This compares to the FMP-1 available, reserved and B&S areas of 1,454,585 ha (1,409,054 ha without B&S), FMP-2 areas of 1,454,586 ha (1,409,055 ha without B&S), and FMP-9 areas 1,454,584 ha (1,409,135 ha without B&S).

The analysis package defines three types of Barren and Scattered (B&S) area: 1) treated B&S harvest depletion area not free to grow (FTG), 2) un-treated B&S harvest depletion area not FTG and 3) natural B&S. Both classes of harvest depletion B&S were assumed to be available and FTG and included in the A5 and A15 age classes either in the forest unit and silvicultural intensity reflecting the renewal treatment or the pre-harvest forest unit for untreated B&S. Therefore, both the harvest depletion classes of B&S were reported as part of the available forest in FMP-1, FMP-2, FMP-9 and SFMM and contributed to the available harvest area immediately even though they are not FTG in all cases or have been treated in some cases. The third class of B&S reflected areas naturally depleted by wildfire, coded as protection forest reserve, or classed as natural B&S stands and totaled approximately 45,449 hectares and were all considered non-forest B&S in SFMM, FMP-1 and FMP-2. These areas were expected to naturally rehabilitate on their own to the same forest unit within 10 years, after which they are part of the available forest and contribute to the available harvest area.

In the SFMM model there is no area classed as "depleted" (i.e. harvest or natural depletion and not renewed and SI = DEPL) or "delay" (i.e. renewed but not yet FTG and SI = DELAY), however there were 195,037 ha of depleted stands reported in FMP-1 and FMP-2.

Discussion:

FMP-1, FMP-2 and FMP-9 appear to match; however the SFMM modeled areas appear to be 42,297 ha higher than Crown owned reported in the FMP tables FMP-1, FMP-2, and FMP-9. This area difference appears to be equivalent to the 41,921 hectares of patent land modeled as ownership reserves in SFMM but not described in the analysis package. There was a total of 41,917.1 ha found in Crown unmanaged (i.e. own=8), patented Crown timber (i.e. own=2), patented other (i.e. own 3 or 4), and other (i.e. own = 6 or 9).

It appears as if unmanaged Crown lands and all patented lands (i.e. ownership 2, 3, 4, 6, 8, 9) have been included in the SFMM modeling and contribute to plan objectives. Given that there are no clear rights to manage patented lands in the Crown Forest Sustainability Act, these patented lands should not be included in the SFMM modeling nor contribute to the plan objective achievements.

There is little or no rationale provided to explain why all depleted forest stands reported in FMP-1 and FMP-2 and harvest depletion B&S stands are considered renewed, FTG and contributing to available forest and AHA. There is also little or no rationale for the assumption that 45,449 ha of natural B&S) can be regenerated naturally in the next 10 years without any silvicultural treatment or investment and that there will not be any natural or man-made B&S persisting on the Kenogami Forest through time.

Conclusion:

SFMM modeled areas do not match the reported areas in FMP-1, FMP-2 and FMP-8.
Areas which are not FTG should not be included in the initial SFMM available land base or contribute to the available harvest area.
Patent lands should not be included in SFMM modeling.
There is a requirement to ensure that silvicultural intensity codes are consistent with FIM technical specifications.

Recommendation # 1:

In SFMM modeling for the 2011 FMP, the SFL Holder should ensure;

1) all areas have silvicultural intensity codes consistent with the latest FIM technical specifications,
2) the accurate depiction of FTG and non-FTG areas,
3) a rationale is provided for FTG assumptions,
4) the modeled and FMP reported areas match,
5) patent lands are excluded from the SFMM modeling and are not contributing to the achievement of plan objectives.

Independent Forest Audit – Record of Finding

Recommendation # 2

Principle: PRINCIPLE 3; FOREST MANAGEMENT PLANNING

Criterion: 3.3.5 FMP social and economic description

3.4.1.5 FMP achievement of the Checkpoint 'Preliminary Endorsement of the LTMD'

Procedure(s):

3.3.5.1. Review the social and economic description to determine whether;

- The information required of the applicable FMP manual was provided and documented including whether forest operations are adding value to the communities.
- It provides appropriate context within which forest management decisions are to be made for the management unit including the planning of forest operations.

3.4.1.5.2. Assess the results of the social and economic assessment of the management strategy.

Background Information and Summary of Evidence:

Using the OMNR approved Socio-Economic Impact Model (SEIM), the 2005 and 2010 Plans' analyses attempted to correlate economic activity with 8 categories of criminal behavior in Nipigon District. We also note that an industrial net water loss analysis result was attributed principally to mining activity in Nipigon District when no local mines were currently operating in the licence area.

Discussion:

The SEIM model provided useful information in helping to assess forest sustainability in the 2005 and 2010 Plans. While SEIM also has the capability to produce other analyses of social and environmental impacts, we feel that some of these analyses are not particularly useful in helping to assess forest sustainability.

Conclusion:

To save planning/analytical effort, planning teams should focus on what information is needed from SEIM related to forest management activities, and not produce less relevant analyses just because SEIM is capable of producing them.

Recommendation # 2:

For the 2011 FMP, the planning team should concentrate socio-economic analysis efforts more directly on the effects of forest management activities.

Independent Forest Audit – Record of Finding

Recommendation # 3

Principle: PRINCIPLE 4; PLAN ASSESSMENT AND IMPLEMENTATION
Criterion: 4.4. Renewal
Procedure(s):

1. Review and assess in the field the implementation of approved renewal operations.

Background Information and Summary of Evidence:

Renewal sites were generally well-stocked to the target species and the renewal program was generally effective.

However, we did observe some localized problems with respect to the quality of planting stock and supervision of tree planting operations from 2007-2009:

- Stocking density in areas that were planted with "held over" planting stock due to the labour dispute was low as a result of seedling mortality.
- Tree planting operations on unscarified areas may require better supervision and monitoring as we noted spacing issues on these sites.
- There was evidence of poor microsite selection for tree planting in some areas.
- Planting quality issues were largely attributed to the use of supervisors lacking tree planting experience during the labour dispute.

Conclusion:

The SFL holder must ensure that qualified staff/contractors supervise tree planting operations and that the level of supervision is sufficient to ensure the delivery of a high quality tree planting program.

Recommendation # 3:

The SFL holder must ensure that qualified staff/contractors supervise tree planting operations and that the level of supervision is sufficient to ensure the delivery of a high quality planting program.

Independent Forest Audit – Record of Finding

Recommendation # 4

Principle: PRINCIPLE 4; PLAN ASSESSMENT AND IMPLEMENTATION
Criterion: 4.7. Access
Procedure(s):

1. Use management (maintenance, access control, any decommissioning provisions)

Background Information and Summary of Evidence:

There is a variance between the number of kilometres (kms) of road constructed reported in the Annual Reports and AWS and the road construction reported and invoiced in the "*Forest Roads and Maintenance Agreement* (FRMA). The discrepancy in reporting was attributed to an invoicing error in the reporting of the number of kilometres constructed on the Anaconda and Castlebar roads. Schedule B of the FRMA listed the total kms eligible for reimbursement as 55.9 and 65.9 kms respectively. These total kms were mistakenly entered into the FRMA Activity Summaries and the Final Report. The actual number of kms constructed/maintained was much less (the road construction approved in the 2008-09 AWS was 26.6 kms for these roads). Instead of reporting the actual number of kilometres where construction occurred, the FRMA invoice reported the number of kms which were eligible for funding in Schedule B of the FRMA.

As a result of our audit investigations we understand that the OMNR Wood Allocation and Measurement Section issued a "roads program update" to re-emphasize the importance of reporting on the actual road work.

Conclusion:

Invoicing errors in the FRMA Activity Summary and Final Report require correction.

Recommendation # 4:

The SFL holder must correct invoicing errors in the *Forest Roads and Maintenance Agreement* Activity Summary and Final Report.

Independent Forest Audit – Record of Finding

Recommendation # 5

Principle: PRINCIPLE 4; PLAN ASSESSMENT AND IMPLEMENTATION

Criterion: 4.7. Access

Procedure(s):

1. Assess whether the planned monitoring program for roads and water crossings was implemented as planned and whether it was effective in determining any environmental or public safety concerns.

Background Information and Summary of Evidence:

During the field audit we noted a requirement for maintenance work on the majority of secondary roads as a result of the recent lack of forest management activity and staff layoffs on the unit. Monitoring had been undertaken to ensure that environmental damage (i.e. crossing failures, erosion into watercourses, etc.) was not occurring. Active roads and crossings were monitored by a “daily monitoring program” where foreman and operators are responsible for the reporting of any instances of washouts or erosion.

Roads management issues are addressed through a “best management practice” approach where corrective measures were taken as soon as possible. TBPI has yet to develop and implement a formal roads monitoring/tracking program.

Discussion:

A formal monitoring program, describing the methods to be used to inspect the physical condition of roads and water crossings to determine if there are any environmental or public safety concerns is a requirement of the revised 2004 FMPM. There is a corresponding annual reporting requirement to provide a summary of monitoring that occurred and observations with respect to any notable problems and the general effectiveness of use management strategies. The current strategy adopted by the SFL holder focuses primarily on active roads. During the field audit it was evident that the majority of secondary roads travelled required some form of maintenance including nuisance beaver trapping. A formal monitoring program was not developed or implemented.

Conclusion:

While monitoring is occurring, TBPI has yet to develop and implement a formal roads monitoring and tracking program.

Recommendation # 5:

The SFL Holder should develop and implement a formal roads monitoring/tracking program.

Independent Forest Audit – Record of Finding

Recommendation # 6 & 7

Principle: PRINCIPLE 6; MONITORING
Criterion: 6.3. Silvicultural Standards Program
Procedure(s):

2. Assess overall effectiveness of treatments.

Background Information and Summary of Evidence:

Silviculture effectiveness monitoring (SEM) is required to assess the success of harvest, renewal and tending operations in regenerating the forest to the desired future forest condition. Regeneration is considered to be a silvicultural success when the standards contained in the Silvicultural Ground Rules (SGRs) have been attained and the depleted area is regenerated to the projected forest unit. A regeneration success is declared when depleted areas are renewed to another forest unit. The results of monitoring are used to confirm or adjust applicable SFMM assumptions.

SFL holders are required to report on Silvicultural and Regeneration Success in AR Table 10 Summary of Harvest and Regeneration Trends. OMNR as a component of its Core District Tasks samples the area declared as free-to-grow by the SFL holder in order to determine silviculture success and regeneration success on the unit. Minimum sampling intensities of between 5-10% (depending on timing of the free-to-grow declaration) are to be achieved when sampling the areas declared as free-to-grow. While the sample intensity was not achieved in 2007-2008, the OMNR is meeting the obligation to conduct SEM monitoring.

Discussion:

There are major discrepancies with respect to findings related to silvicultural and regeneration success reported in OMNR Silvicultural Effectiveness Monitoring Reports and SFL holder Annual Reports. For example, the 2007-08 AR indicates that of the 10,356 ha assessed by the SFL 99.3% was considered to be a silvicultural/regeneration success. 83% of the area assessed was classified as a silvicultural success. OMNR SEM results for a survey of 1,109 ha indicated that 26% of the area surveyed was a silvicultural success and 74% was a regeneration success.

OMNR 2009 Core Task 1 Results Compared to SFL Annual Report (2007-08)

	SFL	OMNR
Area Assessed (ha)	10356	1109
Silvicultural &Regeneration Success (SS/RS) (ha)	10,333 (99.8%)	912 (82%)
Not Successfully Regenerated (NSR) (ha)	23 (<1%)	197 (18%)
Silvicultural Success (SS) (ha)	8.585 (83%)	239 (26%)
Regeneration Success (RS) (ha)	1,747 (17%)	673 (74%)

The variation in the reported data makes it difficult to determine whether forest unit transitions are occurring and to make an assessment of forest sustainability and the effectiveness of the silvicultural program.

The OMNR SEM Report(s) acknowledges the variability in results and indicates an unwillingness to identify the blocks as failures due to inherent differences in reporting between organizations. These include differences between survey methodologies (i.e. extensive (aerial) vs. intensive(ground), treatment of voids, consideration of single species for crop trees), forest unit designations between FMPs, and other data issues related to forest unit descriptions between management terms, stand mapping and silvicultural coding.

In addition to discrepancies in the reported silvicultural and regeneration success, there are also significant discrepancies in reported levels of stocking achievement.

Conclusion:

Differences in survey methodologies between OMNR and the SFL Holder (OMNR surveys are typically ground-based intensive surveys while the SFL Holder surveys may be ground or aerial based) and data formats for Free-to-Grow assessments make it difficult to assess the effectiveness of SGRs and STPs and provide an comprehensive assessment of forest sustainability.

Recommendation # 6:

District OMNR and the SFL Holder should review FTG survey methodologies to address data discrepancies related to silvicultural success and stocking achievement.

Recommendation # 7:

Corporate OMNR should require that District OMNR SEM results be incorporated into the Annual Report process and used to validate the analysis of silvicultural and renewal success conducted by the SFL holder.

Independent Forest Audit – Record of Finding

Recommendation # 8

Principle: PRINICIPLE 6; MONITORING

Criterion:

6.3. Silvicultural Standards Assessment Program

Procedure(s):

1. Review and assess, including in the field, achievement and reporting of the silvicultural standards for the specific SFL/management unit.

Background Information and Summary of Evidence:

Depending on the forest unit, treatment type and establishment species combinations, the Kenogami FMPs have prescribed FTG eligibility ages between 5 years (for pure hardwoods) to 12-14 years (for lowland spruce). A backlog in area requiring free-to-grow survey exists (approximately 64,943 ha of which 37,472 are harvest depletions and 27,471 ha are areas of natural disturbance). The SFL holder is obligated to survey harvest depletions for FTG status and assess the status of natural disturbances for entry into the FRI. There is also a requirement to survey Z classification land for FTG status and tending requirements on 253 ha.

Conclusion:

There is a requirement to address the backlog of free-to-grow assessments and complete the survey of Z lands as required by the SFL.

Recommendation # 8:

The SFL holder and the OMNR must address the backlog area requiring free-to-grow survey and the SFL must complete the survey of Z category lands.

Independent Forest Audit – Record of Finding Recommendation # 9, 10 & 11
Principle: PRINCIPLE 8; CONTRACTUAL OBLIGATIONS **Criterion:** 8.1.1. Payment of Forestry Futures and Ontario Crown Charges. **Procedure(s):** Through a review of OMNR statements determine whether the licencees have paid up to date all amounts in the Ontario Stumpage Matrix for Forestry Futures and Ontario Crown charges (stumpage).
Background Information and Summary of Evidence: Most of the northwest region is experiencing weak and/or unpredictable markets for poplar and other hardwood species. Merchantable wood was utilized to the extent possible given prevailing market conditions for some species. However, the lack of available markets, mill closures, the labour dispute, the SFL transfer and bankruptcies resulted in a significant amount of timber (conifer and hardwood) being left in the bush. There has been a history of problems related to the wood utilization (particularly for hardwoods) on the Kenogami Forest dating back to prior to 2001. At the time of the field audit 245,801 m3 of harvested wood had not been hauled. Much of this wood has deteriorated to an extent that it is likely unmarketable for any use other than biofuel.
Discussion: Schedule documents filed with the Ontario Superior Court of Justice (Court File No. CV-09-8062-00CL) indicate that in September 2010, TBPI agreed to purchase (from the Receiver) 87,182 m^3 of the unutilized timber harvested by BFPL (Schedule A – Term Sheet re: Purchase of Fibre by Terrace Bay Pulp Inc.). A further decision on the purchase of an additional 13,775 m^3 is pending (by March 11, 2011) (Schedule "E" Term Sheet re: Purchase of Fiber by Terrace Bay Pulp Inc. Fibre Not Being Purchased by Terrace Bay Pulp Inc.). Both OMNR and TBPI must agree on any purchase arrangement negotiated. In additional to the wood harvested by BFPL, 144,845 m^3 (106,137 m^3 conifer, 38,707 m^3 hardwood) has been harvested and left in the bush by third party contractors. To date there is no arrangement in place to facilitate the transfer of this wood from the Receiver to TBPI. Crown dues, and Trust Payments (Forest Futures Trust & Silvicultural Trust) on all the unutilized timber remain outstanding.
Conclusion: Crown dues and Trust Payments on all the unutilized timber remain outstanding. The issue of ownership of timber associated with the Neenah SFL needs to be resolved to prevent further product deterioration and volume losses.

Recommendation # 9:

The District OMNR should work with MNDMF to develop and implement an effective system to track and monitor the status of payment of Crown dues on unutilized or non-marketed harvested wood to ensure that required Trust and Crown dues payments are made.

Recommendation # 10:

The SFL Holder and the OMNR/MNDMF need to determine what portion of the unutilized Neenah Paper wood is marketable and agree on a strategy for its utilization within six months of the submission of the Audit Report.

Recommendation # 11:

The SFL holder work with the OMNR/MNDMF to develop a plan within six months of the submission of the Audit Report for the payment of Forestry Futures Trust, Ontario Crown Dues and Forest Renewal Trust payments which are outstanding as of March 31, 2011.

Independent Forest Audit – Record of Finding

Recommendation # 12

Principle: PRINCIPLE 8; CONTRACTUAL OBLIGATIONS

Criterion: 8.1.9 Audit Action Plan and Status Report

Procedure(s):

Review, including through interviews, the audit action plan and assess whether; it was submitted for approval within 2 months of receiving the final audit report.
Review the audit action plan status report and assess whether it was prepared within 2 years following approval of the action plan unless otherwise directed by the Minister.

Background Information and Summary of Evidence:

The IFAPP requires that the SFL holder and OMNR prepare an Action plan within 2 months of receipt of the final audit report. The 2005 IFA report was submitted in February 2006. The Action plan was approved in October, 2006 approximately 6 months late. The Status Report was required by October, 2008. Work on the report did not start until October, 2009. It was signed by the Regional Director November 15th, 2010.

Conclusion:

The Action Plan and Status Report must be produced in accordance with IFAPP timing requirements.

Recommendation # 12:

The SFL holder and the District OMNR must ensure the Action Plan and Status Report responding to IFA recommendations are submitted in accordance with the reporting timeline specified in the IFAPP.

Independent Forest Audit – Record of Finding

Recommendation # 13

Principle: PRINCIPLE 8; CONTRACTUAL OBLIGATIONS

Criterion: 8.1.2. Wood Supply Commitments, MOAs, sharing arrangements, special conditions

Procedure(s):

1. Determine whether wood supply commitments and any special conditions have been complied with, including completing any required MOAs or sharing arrangements.

Background Information and Summary of Evidence:

The 2005 IFA recommended that "*the OMNR and Neenah Paper, in cooperation with Tembec resolve the wood supply commitment to Tembec, Hearst, in Appendix E of the SFL*". Appendix E Condition # 4 commitment requires Tembec to deliver 25,000 m^3/yr (wood chips) to the Terrace Bay mill in exchange for fibre supplied from the Kenogami Forest. The parties have not entered into a MOA and the commitment appears to be unnecessary to the operation of either facility.

Conclusion:

Tembec and TBPI have not entered into a MOA for the exchange of fibre and the commitment appears to be unnecessary to the operation of either facility. The commitment should be removed from Appendix E of the SFL.

Recommendation # 13:

Corporate OMNR should work with the MNDMF to remove the wood supply commitment to Tembec Hearst from Appendix E of the SFL.

Appendix 2

Management Objectives Table

ASSESSMENT OF THE ACHIEVEMENT OF MANAGEMENT OBJECTIVES

Note:
The objectives, targets, and strategies for the 2010 Kenogami Contingency Plan were adopted directly from the 2005 Kenogami FMP and our analysis below is of the 2005 FMP objectives. We do however refer to the 2010 Contingency Plan in this Appendix when comments made by the 2010 Contingency planning team were useful in our analysis.

2005 FMP OBJECTIVES (goals/targets)	**ASSESSMENT OF OBJECTIVE ACHIEVEMENT (MET, NOT MET, PARTIALLY MET)**	**AUDITOR COMMENTS**
A) Forest Diversity Objectives		
Objective A 1. *To ensure that the forest structural aspects of biodiversity on the Kenogami Forest are maintained, or modified to approach the trends of the Natural forest.* To emulate the age class trends of the natural forest scenario for each forest unit.	MET	In the 2010 Contingency Plan the trend of the current age class structure will move towards the trend of the natural forest condition by the year 2135. In the 2005 FMP the proportion of Old Growth age classes within each forest unit group remained above the lower bounds (20% below the lowest value) of the Natural Benchmark scenario through time.
Objective A 2. *To ensure that the forest composition aspects of biodiversity on the Kenogami Forest are maintained, or modified to approach the trends of the Natural forest.* To emulate the trends of the natural benchmark for forest unit area distribution.	MET	In the 2010 Contingency Plan the total area for each forest unit was within +/- 20% of the Natural Benchmark scenario, by the year 2135.
Objective A 3.	MET	The 2005 FMP indicated that 8 out

To ensure that the landscape pattern aspects of biodiversity on the Kenogami Forest are maintained, or modified to approach the trends of the Natural forest. To Emulate the trends of the natural forest template with respect to disturbance pattern and size classes.		of 10 measurable size classes are moving towards the Kenogami natural template. The 10-70 and the 1,500-2,500 hectare size classes are moving opposite to the desired direction. However, the shifting in the 1,500-2,500 size class is almost negligible, and the discrepancy in the 10-70 size class is probably a result of many smaller natural disturbances not being reflected in the inventory. The 70-130 and 130-260 ha size classes moved in the desired direction.
B) Social and Economic Matters (including timber harvest levels).		
Objective B 1. *To provide a sustainable, consistent, and economically viable supply of timber to the local industry or individuals, acquired through environmentally sound practices and to promote the efficient utilization of available wood fibre.* To provide the Kenogami Forest's portion of the Northwest Region wood supply goal (1.291M m^3/year conifer, 282K m^3/year poplar and 74K m^3/year birch).	PARTIALLY MET	Analysis in the 2010 Contingency plan indicated that there is a slight drop (2-3%) in spruce, pine, and fir over the next sixty years, relative to the Selected Management Alternative (SMA) target of 1.291 million m^3/year conifer. There was a significant jump (12%) projected in poplar supply in Term 2, but it was fairly stable afterwards. The birch volumes were variable. This objective was met in FMP planning, but has not been realized in practice. During the current 2005-2010 term, only 46% of the area and only 48% of the volume was harvested. Most of the volume came from the jack pine and spruce species. Actual harvest volume levels in the previous three plan terms were 84% (1990-1995), 67% (1995-2000) and 77% (2000-2005). 245,801 m^3 of harvested timber remains in the bush. A significant portion of this wood has deteriorated to the extent that it is likely unmarketable.

		OMNR non-compliance rates were 8% but the non-compliances were minor in nature. Industry non-compliance rates were 2% and were also minor in nature.
Objective B 2. *To support public and private initiatives for economic development of non-timber resources, including non-timber forest products, where they are compatible with all other objectives for forest sustainability and resource use, and which are consistent with existing commitments.* To encourage optimum levels and diversity of employment opportunities.	NOT MET	In the 2005 FMP, the existing road network and planned roads were designed to facilitate this objective. Fuel wood areas were allocated north of Terrace Bay and all allocations were generally accessible for fuel wood. The economic downturn over the plan period has negatively affected all industries and communities. First Nation employment was effected by the economic downturn. For example, Long Lake Forest products has an agreement with the Ginoogaming FN and when operating approximately 80 % of the employees are Aboriginal. Constance Lake has a volume allocation. The Aroland FN has been employed on road contracts.
Objective B 3. *To preserve the long-term viability and sustainability of the local forest-based communities and businesses.* Year-round employment opportunities.	NOT MET	The 2010 Contingency plan indicated that an appropriate winter/summer balance of available harvest areas would be achieved annually over the next sixty year period (maximum 45% AHA in the Spruce Lowland Rich and Spruce Poor forest units), to facilitate year-round forest management activities. The goal of Year-round employment opportunities has not been met in the 2005-10 term. Due to market issues, winter harvesting operations were curtailed from February 2008 to May 2008, and again in February 2009. The shutdown in 2009 was also accompanied by a closure of

		the Terrace Bay Pulp Inc. pulp mill, and followed by Companies' Creditors Arrangement Act (CCAA) protection. This closure, being under the CCAA and restructuring has had the harvesting and mill operations shutdown since February 2009 to date. In total, approximately 21 months of harvesting activities have been lost due to financial difficulties and an additional 11 months due to the labour dispute. The reduction and curtailment of the harvest area and volume has resulted in the deterioration of the economic stability of the communities within the Kenogami Forest as there are no longer manufacturing / harvesting operations employing people. Communities have decreased in size and people have had to move to other locations to find employment opportunities
Objective B 4. *To provide opportunities for First Nations participation in forest management planning activities.* To have every First Nation community within or adjacent to the Kenogami Forest, fully involved in the 2005-25 FMP planning process.	MET	Every First Nation community within or adjacent to the Kenogami Forest, was involved in the 2005 FMP planning process. The Native Background Information Report and the Report on the Protection of Identified First Nation Values were prepared by the OMNR, in consultation with the six affected communities.
Objective B 5. *To identify and protect the cultural and spiritual values of all forest users.* To protect the non-renewable cultural and spiritual values in Ontario's forests.	MET	For 2005 FMP planning, known and registered cultural heritage values, and recorded archaeological resource data site point locations were received from the Ministry of Culture. A Memorandum of Understanding to facilitate data sharing was agreed upon between specified planning team members and the Crown. Areas of high potential

		cultural heritage values were also provided to the planning team.
C) Provision of Forest Cover (for those values which are dependent on forest cover)		There were discrepancies between the OMNR SEM data and the SFL holder data with respect to silviculture and regeneration success. This complicates the achievement of several objectives related to forest cover.
Objective C 1. *To manage forest cover for the provision of suitable fish and wildlife habitat that contributes to healthy sustainable populations.* To provide for the sustainable harvest (food, fur or other benefits) or other uses (such as photography or viewing pleasure) of forest-based fish and wildlife populations.	MET	In the 2005 FMP, all harvest allocations met appropriate and applicable guidelines. The Selected Management Alternative projected the most attractive future forest conditions for provision of preferred habitat for the selected list of wildlife species.
Objective C2. *To maintain a continuous supply of suitable caribou habitat, distributed both geographically and temporally across the landscape in such a manner as to ensure permanent range occupancy.* To Maintain continuous caribou range occupancy. - Implement a strategy that provides for acceptable levels of caribou habitat, while at the same time minimizing the losses of available wood fibre. - Maintain 40% of the CARNE sub-unit in age classes 80+, through the planning horizon.	PARTIALLY MET	The SMA for the 2010 Contingency Plan is designed to maintain at least 40% of the Caribou Northeast sub-unit in age classes of 80 years or older, for a 200 year period. A planned increase in larger disturbance areas required for caribou management did not occur during the 2005 FMP term. We are concerned with the overall low level of harvest given the requirements of the caribou conservation strategy. We question whether plan objectives related to the provision of caribou habitat (through the provision of large even-age disturbance patches) can realistically be achieved on this Forest.
Objective C3. *To maintain a continuous supply of suitable marten*	MET	The 2010 Contingency Plan target was to ensure that 10-20% of the capable forest area (south of the

habitat, distributed both geographically and temporally across the landscape. To Maintain 10 - 20% of the forest, which has the capability to produce marten, in suitable conditions and arranged in "core habitat areas" across the landscape, through time.		caribou sub-unit line) is maintained in suitable condition and arranged in marten core areas for 20-year intervals over a 60-year period. The Plan provided for approximately 9.5% suitable habitat for the 2005-2025 period and approximately 11% for the 2020-2045 and 2045-2065 periods.
Objective C 4. *To manage forest cover for the provision of other recreational uses.* To Maintain the current amount of area that is generally available and accessible for public use.	PARTIALLY MET	The 2005 FMP provided for areas for personal and/ or commercial use of fish and wildlife. Tourism operators expressed concerns about the effect of future road closures on road based moose hunting. As a result of the prevailing economic conditions and the labour dispute only 26% and 49% of planned primary and branch road construction occurred during the audit period. The current roads monitoring program is not tracking the status of all roads for which TBPI has responsibility. Costs of decommissioning and rehabilitating roads and right-of-ways are high and we are concerned that the full financial burden of meeting the caribou policy objective is appropriated to forest industry.
Objective C 5. *To recognize the rights and needs of the remote and road-based tourism industries, while conducting forest management activities.* Provide for a range of quality tourism opportunities in Ontario, while respecting the rights and needs of SFL	MET	The 2005 FMP recognized the importance of roadless wilderness areas to ensure the remoteness of the resource-based commercial tourism businesses. Resource Stewardship Agreements were negotiated with Neenah Paper and all willing and licenced tourism operators. Area of Concern prescriptions were implemented to protect remote tourism values.

holders.		In our interviews with tourism operators support was expressed in principle for caribou management but they had concerns about road closures and indicated that moose should be managed for as well as caribou.
D) Silviculture		
Objective D 1. *To ensure every forest stand depleted is renewed and tended, as required, using the most appropriate and cost effective silvicultural knowledge and technology to achieve the desired future forest condition.* To invest sufficiently to maintain forest sustainability.	PARTIALLY MET	In the 2005 FMP, all stands selected for harvest had an associated silvicultural prescription. The planning team made their decision on the SMA based on cost effectiveness, provision of appropriate silvicultural treatments in a balanced approach and the relatively low proportion of aerial spray prescriptions. Renewal targets for the 2005-2010 plan were achieved (98%). The area treated by artificial renewal was considerably higher than planned (111%) The total area renewed is generally in balance with the area harvested for the audit term. Our site inspections indicated that renewal sites were generally well-stocked to the target species and that the renewal program was generally effective in renewing the Forest. Crown dues and Trust payments are outstanding for 245,801 m^3 of un-utilized timber. Some issues were observed with respect to the quality of planting stock and plant supervision for seedlings planted from 2007-2009. Tree planting spacing issues existed on some sites and there was inadequate distribution and number of seed trees on some CLAAG prescription sites. There was less mechanical site preparation and tending than planned, and none in 2009-2010. Our site inspections indicated that

		site preparation was effective. A backlog in free-to-grow assessments exists and a requirement to survey Z classification lands remains outstanding. There are major discrepancies between the OMNR the SFL holder in the calculation of silvicultural and regeneration success and stocking achievement.
Objective D 2. *To improve the forest growth and health of low volume and/or low quality forest stands.* To Improve the utilization of Crown timber and increase the volume and/or quality of Crown timber over the long term.	PARTIALLY MET	Our field inspections indicate that the slash management program is reducing the area of productive forest land lost to logging debris. No pre-commercial thinning and limited tending work was done during the audit term. Salvage opportunities were identified at the Annual Work Schedule level.
Objective D 3. *To cooperate with forest research agencies to develop and/or implement viable, economical and ecologically-based alternatives to existing forest management practices.* To develop and apply the knowledge and understanding required to achieve forest sustainability in a more economical fashion.	MET	The level of renewal support consisted of seed collection, nursery stock production and tree improvement work and was sufficient for the scale of the renewal program.
Objective D 4. *To manage for long-term forest health, productivity and economic viability by protecting the forest resource from*	MET	No pest protection activities occurred during the audit term.

damaging agents, such as wildfire, pests and diseases. Protection of forest resources from wildfire, insects and disease.		

Appendix 3

Compliance with Contractual Obligations

Licence Condition	Licence Holder Performance
Payment of Forestry Futures and Ontario Crown charges.	The SFL holder and Overlapping Licences are in arrears with respect to Forestry Futures and Ontario Crown Charges. Recommendations 9, 10 & 11 are provided to address this concern.
Wood supply commitments, MOAs, sharing arrangements, special conditions.	The SFL holder met its required wood supply commitments. The supply commitment to Tembec was not met as Tembec was unable to supply wood chips. Recommendation # 13 addresses this concern.
Preparation of FMP, AWS reports; abiding by the FMP, and all other requirements of the FMPM and CFSA.	Annual reports were generally submitted on time, but most ARs required re-submission. There were long delays for MNR acceptance of re-submitted reports. FMPM and CFSA requirements were met for the preparation of other documents.
Conduct inventories, surveys, tests and studies; provision and collection of information in accordance with FIM.	The FRI was not updated for harvest depletions due to staff layoffs and reductions during the audit term. Base features and values information was updated for the 2011 FMP and a new inventory is in production. There is a backlog of area requiring FTG surveys. There is also a requirement to complete the survey of Z lands. Recommendation # 8 addresses this concern.
Wasteful practices not to be committed.	A lack of markets, closure of the Terrace Bay mill, the SFL transfer and a labour dispute resulted in approximately 245,000 m^3 of wood

	being felled and not utilized. Much of the wood is poplar which is likely not in a marketable condition due to wood deterioration. Recommendation # 10 is provided to address this concern.
Natural disturbance and salvage SFL conditions must be followed. Complete a FMP Amendment to deal with salvage circumstances. Meet all silvicultural standards on the harvested salvage area. Salvage area not harvested to be listed as natural depletion in the Annual report.	Limited salvage operations occurred during the audit term. Operations met FMPM requirements.
Protection of the licence area from pest damage, participation in pest control programs.	There were no pest control issues during the 5 year term.
Withdrawals from licence area.	There were no withdrawals from the licence during the 5 year period.
Audit action plan and status report.	Both the Action Plan and Status Report were submitted late. Recommendation # 12 is provided to address this issue.
Payment of forest renewal charges to Forest Renewal Trust (FRT).	Payments of forest renewal charges are outstanding. Recommendations # 9, 10 and 11 are provided to address the outstanding Trust payments.
Forest Renewal Trust eligible silviculture work.	Audit site inspections (10% sample) determined that maps were accurate and work was completed as invoiced in the Specified Procedures Report.
Forest Renewal Trust forest renewal charge analysis.	OMNR and the SFL completed an analysis of renewal charges. Renewal rates were deemed sufficient to sustain operations.
Forest Renewal Trust account minimum balance.	The SFL Holder did not maintain the required minimum balance for 3 years

	of the audit term. A recommendation (#11) is provided.
Silviculture standards and assessment program.	There is a backlog in area requiring FTG survey and there are Z category lands which require survey (Recommendation # 8). There are significant discrepancies between OMNR SEM data and SFL Holder FTG data. Recommendations #'s 6 & 7 are provided to address this issue.
Aboriginal opportunities.	Opportunities were provided to Aboriginal communities to participate in FMP development. Economic participation by Aboriginal communities was negatively impacted by the downturn in the forest sector and the closure of destination mills.
Preparation of compliance plan.	Compliance plans were prepared as required.
Internal compliance prevention / education program.	When the mill and woodlands work force were operational there were appropriate internal training and education programs.
Compliance inspections and reporting; compliance with compliance plan.	The number of inspections was appropriate for the level of activity on the Forest. There was adherence to the compliance plan. There were no major compliance issues or trends during the audit term.
SFL forestry operations on mining claims.	All proper notifications were completed.

Appendix 4

Audit Process

This IFA consisted of the following elements:

Audit Plan: An audit plan describing the schedule of audit activities, audit team members, audit participants and the auditing methods was prepared and submitted to GreenForest Inc., the OMNR Geraldton District, Regional OMNR, and the GANRAC chairperson in July 2010.

Public Notices: Public participation in the audit was solicited by the placement of public notices and an invitation to provide comments and/or complete a survey on the Arbex website in the Times Star (Geraldton) and the Wawatay News. A random sample of 35% of the individuals and organizations listed in the 2008 FMP mailing list were sent a letter and a survey questionnaire to solicit input to the audit process. All FNs with an interest in the Forest were contacted by mail to participate and/or express their views. Each FN received several follow-up telephone calls and/or e-mails. One audit team member attended a regularly scheduled GANRAC meeting.

Field Site Selection: Field site selections were made by the Lead Auditor and the Arbex GIS Specialist in June. Site selections were confirmed and finalized with GreenForest and OMNR staff at the Pre-Audit Meeting in July.

Site Audit: The audit team spent 7 days in Geraldton during September 2010, conducting the field audit, document and record reviews and interviews. The field audit sampled between 10% and 24 % of the forest management activities (including road construction and maintenance) that occurred during the audit term. (See the IFA Field Sampling Intensity below).

Sample sites were stratified to ensure representation by silvicultural activity and year of operation. The audit team also inspected the application of Areas of Concern prescriptions, aggregate pits and water crossing installations. Areas listed in the "Forest Renewal and Maintenance Agreement" and invoiced in the "Forest Renewal Trust Specified Procedures Report" were also visited to ensure conformity between invoiced and actual activities. Category 9 and forestry aggregate pits were also inspected to assess compliance with provincial standards. The field inspection included site-specific (intensive) and landscape-scale (extensive (helicopter)) examinations. Individual sites were selected to represent a primary activity (i.e. harvesting, site preparation); however, all associated activities at the site were assessed at the same time, allowing the team to augment the planned sampling intensity.

Report: This report provides a description of the audit process and a discussion of audit findings and conclusions. Recommendations are directed at deficiencies in forest management and associate processes that require a corrective action. Recommendations must be dealt with in a formal Action Plan developed by the SFL holder and the District OMNR within two months of the receipt of the final Audit Report.

Procedures Audited, by Risk Category								
Principle	**Low Risk**			**Medium Risk**			**High Risk**	**Comments**
	Applicable (#)	Selected (#)	% Audited	Applicable (#)	Selected (#)	% Audited	Audited (#) (100% Audited)	
1. Commitment				2	1	50	0	This principle was considered met as the Forest was certified by the Sustainable Forestry Initiative.
2. Public Consultation and Aboriginal Involvement				6	3	50	2	The following procedure was not audited: 2.6.1.
3. Forest Management Planning	7	4	57	12	10	91	41	The following procedures were not audited; 3.2.1., 3.2.2., 3.3.2.3., 3.7, 3.8.
4. Plan Assessment & Implementation	1	1	100	1	1	100	10	All procedures audited.
5. System Support				1	1	100	1	This principle was considered met as the Forest was certified by the Sustainable Forestry Initiative.
6. Monitoring				7	7	100	11	All procedures audited.
7. Achievement of Management Objectives and Forest Sustainability				2	2	100	15	All procedures audited.
8. Contractual Obligations				7	7	100	13	The following procedures were not audited; 8.1.2.0, 8.2
Totals	8	5	78	38	32	86	93	

IFA Field Sampling Intensity on the Kenogami Forest[13]

Activity	Total Area (Ha) / Number	Planned Sample Area (Ha)	Actual Area (Ha) Sampled[14]	Number of Blocks[15] Visited	Percent[16] Sampled (%)
Harvest	32,223	13,436	13,436	42	41
Renewal	29,514	4,555	4,555	26	15
Site Preparation (Mechanical and Chemical)	11,514	1,179	1,179	14	10
Tending	7,104	722	722	11	10
Free-to-Grow	55,048	5,546	5,546	7	10
Slash Management (Piling and Burning)	24,626	2,465	2,465		10
Specified Procedures Report Sites	18,645	1,864	1,900	34	10
Water Crossings	78	8	8		100
Primary and Branch Road Construction (kms)	55.3	5	55.3		100
Forest Roads and Maintenance Agreement Work[17]	7,392	739	850		25

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[13] During the field audit we observed numerous areas where AOCs had been implemented in either linear buffer strips or in association with an identified value. We cannot provide an accurate estimate of the sample intensity given the linear nature of many of the buffers. All AOCs associated with sample sites were observed.

[14] Not every hectare of the area sampled is surveyed, as this is not feasible.

[15] Blocks are comprised of amalgamated stands.

[16] Percent sampled represents a combination of primary and secondary audit activities inspected on a site.

[17] The Roads Invoices for maintenance and construction often list a given road and length a number of times, especially for maintenance. Therefore the total km listed for a given road is a 'gross' figure compared to the 'net' figure which is contained in the annual report.

Summary of Consultation and Input to the Audit

Public notices and an invitation to provide comments and/or complete a survey on the Arbex website were placed in the Times Star (Geraldton) and the Wawatay News. A random sample of 35% of the individuals and organizations listed in the 2007 FMP mailing list were sent a letter and a survey questionnaire to solicit input to the audit process. Four responses to the invitations to participate were received. The overriding issue/concern identified in the public submissions was the significant volumes of unutilized wood on the unit.

All FNs with an interest in the Forest were contacted by mail to participate and/or express their views. Each FN received several follow-up telephone calls and/or e-mails. Two First Nation representatives were interviewed and provided broad perspectives on issues associated with forest management. These included a concern about protection of cultural values, ongoing notification about forest planning and operations, and a desire for increased economic benefits.

Two LCC members attended the field audit and an auditor attended a regularly scheduled meeting of the LCC. The LCC was concerned about continuing to be proactively involved in forest planning and operations as well as other resource management activities (e.g. fisheries management). With increasing workloads and the complexity of modern resource management there was concerned expressed about their ability to have the time and knowledge to continue to provide knowledgeable advice to the OMNR. LCC members were concerned about the long term effects of the caribou plan on their local industry and community members.

GreenForest staff assigned to represent TBPI and Buchanan Wood Industries (BWI) staff participated in the field audit and/or were interviewed by audit team members. GreenForest issues included;

- Concerns about the implementation costs associated with the caribou mosaic.
- Concerns about the OMNR's understanding of the forest management complexities and realities of trying to implement the caribou mosaic (e.g. rotation ages, harvesting of caribou blocks vis-à-vis wood marketing realities).
- A healthy skepticism about the science underlying the delivery of the caribou program.
- Concerns about the state of the economy.
- Concerns about the time and costs associated with forest management planning.

OMNR staff participated in the field audit and/or were interviewed. Issues included;

- Concerns about the health of the industry and its ability to meet harvest objectives.
- Concerns about the time and costs associated with forest management planning.
- Concerns about the large amount of harvested wood left in the bush.
- Concern about tree plant supervision in unscarified areas.

In our interviews with three tourism operators they identified a strong working relationship with the company and the OMNR. While support was expressed in principle for caribou management, they had concerns about the effect of road closures on road based moose hunting and indicated that moose should be managed for as well as caribou.

Appendix 5

List of Acronyms Used

ACOP	Annual Compliance Operations Plan
AHA	Available Harvest Area
AOC	Area of Concern
AR	Annual Report
AWS	Annual Work Schedule
AZA	Animbiigoo Zaagi'igan Anishinaabek
BFPL	Buchanan Forest Products Ltd
B&S	Barren and Scattered
BWI	Buchanan Wood Industries
CCAA	Companies' Creditors Arrangement Act
CFSA	Crown Forest Sustainability Act
CLAAG	Careful Logging Around Advance Growth
CP	Contingency plan
EMS	Environmental Management System
FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FN	First Nation
FOP	Forest Operations Prescription
FRMA	Forest Roads Maintenance Agreement
FRI	Forest Resource Inventory
FRMA	Forest Roads and Maintenance Agreement
FRT	Forest Renewal Trust
FSI	Forest Stewardship Initiative
FTG	Free-to-Grow
FU	Forest Unit
GANRAC	Geraldton Area Natural Resources Advisory Committee
Ha	Hectares
IEA	Individual Environmental Assessment
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
Inc.	Incorporated
kms	Kilometres
LCC	Local Citizens Committee
LLFP	Long Lake Forest Products Inc.
Ltd.	Limited
LTMD	Long Term Management Direction
LWI	Longlac Wood Industries
m^3	Cubic Metres
MNDMF	Ministry of Northern Development Mines and Forestry
MOA	Memorandum of Agreement
MUC	Management Unit Contribution
MROLS	Ministry Recognized Operating Levels
NDPEG	Natural Disturbance Pattern Emulation Guidelines
OMOE	Ontario Ministry of the Environment
OMNR	Ontario Ministry of Natural Resources

PCThin	Pre-Commercial Thinning
PjPUR	Pure Jack Pine Stands
PMS	Preferred Management Strategy
PoPUR	Pure Poplar Stands
RD	Regional Director
R.P.F.	Registered Professional Forester
SEM	Silvicultural Effectiveness Monitoring
SEIM	Socio-Economic Impact Model
SFI	Sustainable Forestry Initiative
SFL	Sustainable Forest Licence
SFMM	Strategic Forest Management Model
SGR	Silvicultural Ground Rule
SMA	Selected Management Alternative
SPF	Spruce/Pine/Fir
STP	Silvicultural Treatment Package
TBPI	Terrace Bay Pulp Inc.
VS	Versus

Appendix 6

Audit Team Members and Qualifications

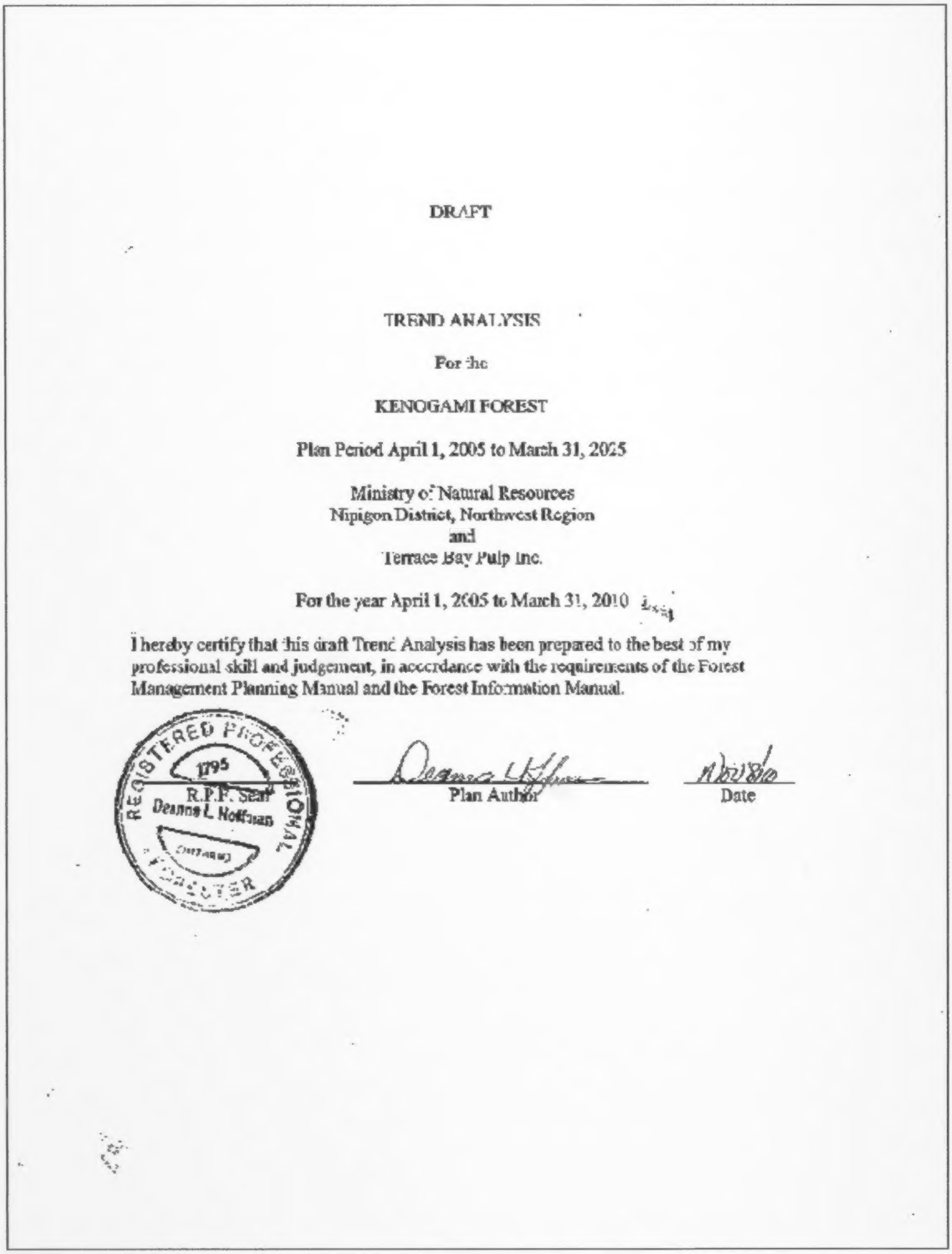
Name	Role	Responsibilities	Credentials
Mr. Bruce Byford R.P.F. Arbex Forest Resource Consultants Ltd.	Lead Auditor Forest Management & Silviculture Auditor	Audit Management & coordination Liaison with OMNR & Auditee Review documentation related to forest management planning and review and inspect silviculture practices Determination of the sustainability component.	B.Sc.F. ISO 14001 Lead Auditor Training. FSC assessor training. 30 years of consulting experience in Ontario in forest management planning and resource inventory. Previous work on 13 IFA audits with lead auditor responsibility on 11 IFA. 16 FSC certification assessments with lead audit responsibilities on 7.
Mr. Al Stewart Arbex Senior Associate	Wildlife/First Nations Auditor	Review & inspect AOC documentation & practices First Nations consultation Determination of the sustainability component.	B.Sc. (Agr.) ISO 14001 Lead Auditor Training. FSC assessor training. 41 years experience in natural resource management planning, field operations, policy development, auditing and working with First Nation communities. Previous work experience on 13 IFA audits.
Mr. David Watton Arbex Senior Associate	Forest Management Planning & Public Participation Auditor	Review documentation and practices related to forest management planning & public participation Determination of the sustainability component.	B.Sc., M.Sc. ISO 14001 Lead Auditor Training. 41 years experience in natural resource management planning, land use planning, field operations, and policy development. Previous work experience on 12 IFA audits.

Mr. Trevor Isherwood R.P.F. Tri-lac Forestry Services Arbex Senior Associate	Silvicultural, Forest Management and Contractual Compliance Auditor	Review and inspect silvicultural practices and related documentation Review and inspect documents related to contractual compliance and socio-economics Determination of the sustainability component.	B.Sc.F. Former General Manager of SFL 41 years experience in forest management and operations. Previous work experience on 9 IFA audits.
Mr. Mark Fleming R.P.F.	Technical Advisor - SFMM	Analysis of SFMM model outputs and decision criteria and the determination of the sustainability component.	B.Sc.F., R.P.F. Previous work experience on IFA audits and FSC certification assessments. Experience as OMNR Planning Forester & Unit Forest.
Dorothy Dobrik GIS Specialist Arbex Forest Resource Consultants Ltd.	Administrative Assistant	Administrative Support to the audit including GIS support for the selection of sample sites.	B.A. Geography, Diploma Forestry Tech Diploma GIS Specialist Previous administrative support in IFA and FSC audits.

Appendix 7

Trends Analysis

The Comparison and Trend Analysis of Planned vs. Actual Forest Operations was prepared by the forest management service provider GreenForest Management Inc. The report is included in this audit report without modification or adjustment.



DRAFT

TREND ANALYSIS

For the

KENOGAMI FOREST

Plan Period April 1, 2005 to March 31, 2025

Ministry of Natural Resources
Nipigon District, Northwest Region
and
Terrace Bay Pulp Inc.

For the year April 1, 2005 to March 31, 2010

I hereby certify that this draft Trend Analysis has been prepared to the best of my professional skill and judgement, in accordance with the requirements of the Forest Management Planning Manual and the Forest Information Manual.

REGISTERED PROFESSIONAL FORESTER
1795
R.P.F. Seal
Deanna L. Hoffman

Deanna Hoffman
Plan Author

Nov 8/10
Date

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4.0 ADDITIONAL REQUIREMENTS FOR THE YEAR SEVEN AND YEAR TEN MANAGEMENT UNIT ANNUAL REPORTS

4.1 Implementation of Forest Operations – Trend Analysis

The past plan terms were relatively stable compared to the current plan period. There were slight market fluctuations resulting in temporary shutdowns or reductions in production with the local sawmills, waferboard and plywood mills, as well as the pulp mill.

The current plan term (2005-2010) saw large changes, some due to the downturn in the economy that has lasted longer than expected and others due to management decisions. The Long Lake and Nakina sawmills were idled, Longlac Wood Industries Inc. closed the waferboard and plywood mill in Longlac permanently, and the Terrace Bay pulp mill was shut down and subsequently sold to the Buchanan group of companies.

With these changes, the 2005-2010 Kenogami Forest Management Plan was not completed as planned. Beginning January 31, 2006, Neenah Paper Company of Canada Ltd.'s woodlands employees went on strike causing the scheduled harvest to cease. Other third party operators also ceased operations as their operators would not cross picket lines. This resulted in the shutdown of all harvest operations. With the woodlands employees still on strike, the Terrace Bay mill was closed in June of 2006, by Neenah Paper.

The Terrace Bay pulp mill was sold and the SFL was transferred to Terrace Bay Pulp Inc. from Neenah Paper Company of Canada on August 29, 2006. After the transfer, no harvesting took place until mid-November due to the concern for the safety of any workers that would take over the harvest as well as the time required to develop Third Party agreements with operators. Once operations did commence, they were kept relatively small to gauge reactions from the striking workers until January 2007 when harvesting operations began to be scaled up.

Due to market issues, winter harvesting operations were curtailed from February 2008 to May 2008, and again in February 2009. The shutdown in 2009 was also accompanied by a closure of the Terrace Bay Pulp Inc. pulp mill, and followed by Companies' Creditors Arrangement Act (CCAA) protection. This closure, being under the CCAA and restructuring has had the harvesting and mill operations shutdown since February 2009 to date.

In total, approximately 21 months of harvesting activities have been lost due to financial difficulties and an additional 11 months due to the labour dispute.

There was a 2010-2011 Contingency Plan prepared and approved for the Kenogami Forest. No harvesting activities have taken place to date from this plan, however silviculture activities have continued.

4.1.1 Harvest Area

Planned harvest activity on the Kenogami Forest over the past 3 terms varied from 6,444 ha to 11,564 hectares per year over all forest units. Examining the actual harvest levels, 54% of the area was harvested during 1990-1995, 74% between 1995-2000 and during 2000-2005, 83% of the area was harvested. During the current 2005-2010 term, only 46% of the area was harvested. AR-7 Summary of Planned and Actual Harvest Area contains the actual numbers from the past plans. Figure 1 below shows the comparison by term.

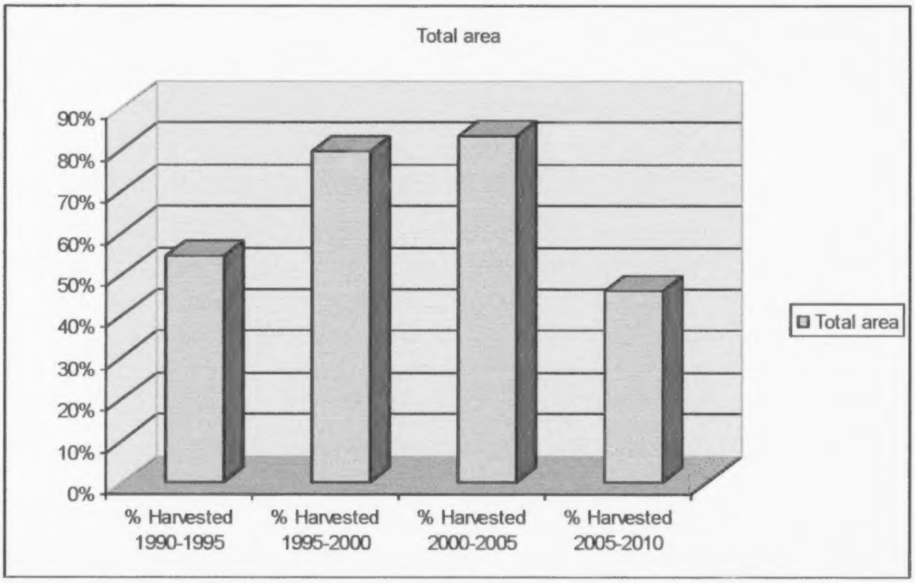


Figure 1. Percent harvested overall

There have been several forest units that have been consistently harvested over the past two terms, these being the PjPur, SpLoR, SPoor and SpPur forest units at approximately 88% of planned. The PjPur and SpPur forest units are more readily accessible any time of year and are generally more productive therefore are sought after and harvested more frequently. As well, they are also the more prevalent forest units on the Forest which increases the availability of these stands under different conditions (market and weather).

The current plan (2005-2010) has the PjPur, PjSMx and SpPur being the highest harvested forest units compared to the planned area as well although they are only at 79%, 65% and 61% respectively. This is due to the amount of harvesting during the frost-free months. With the recent winter operation shut-downs, the SPoor and SpLoR forest units had only incidental stands cut during the summer months, or short periods of time when harvesting could occur on the frost, and the ability to easily build road within these stands.

The low poplar harvest area is partly due to the fluctuating market for poplar products which reduced the amount of poplar harvested. Poplar pulp (produced at the Terrace Bay pulp mill), and veneer and waferboard products produced by Longlac Wood Industries Inc. used less fibre than originally planned. LWI was also closed in 2009 and therefore did not harvest their planned allocations during the current plan.

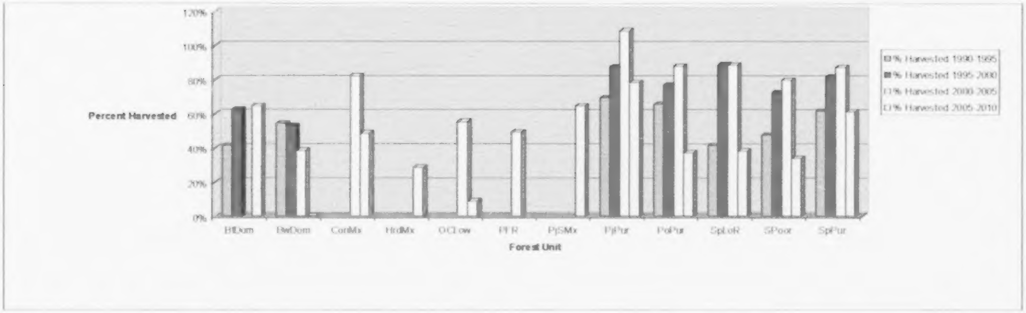


Figure 2. Percent harvested by forest unit

The reduction in area for the current term was due to the labour dispute and curtailment of operations as discussed in Section 4.1. This has affected the preparation of the 2011-2021 FMP. The reduction in harvest area was less than half of the projected amount (46%). In order to reflect a more accurate inventory, areas that were originally forecast to be depleted were put back into the inventory as its original typing and used to model into the future.

The objectives that that have been affected by this reduction are those relating to the social and economic opportunities/well being of the communities within and adjacent to the Kenogami Forest. The objectives that would seem to be affected would be those relating to:

> B1 - providing a sustainable, consistent, and economically viable supply of timber to the local industry or individually, acquired through environmentally sound practices and to promote the efficient utilization of available wood fibre; and
>
> B3 to preserve the long-term viability and sustainability of the local forest-based communities and businesses.

When the FMP was developed, it achieved these objectives. The downfall was the implementation of the plan and the reduction in harvest area. The plan objective was met, just not implemented. The reduction and curtailment of the harvest has resulted in the economic stability of the communities within the Kenogami Forest to deteriorate as there are no longer manufacturing/harvesting operations employing people and therefore the communities have decreased in size and people have had to move to other locations to find employment opportunities.

4.1.2 Harvest Volume

Planned annualized harvest volumes on the Kenogami Forest over the past 3 terms varied from 804.8 m^3 to 1,551.8 m^3 (in '000 m^3 per year), over all forest units. Examining the actual volume levels, 84% of the volume was realized during 1990-1995, 67% during 1995-2000 and during 2000-2005, 77% of the volume was realized. During the current 2005-2010 term, only 48% of the volume was harvested. Most of the volume came from the Jack pine and Spruce species.

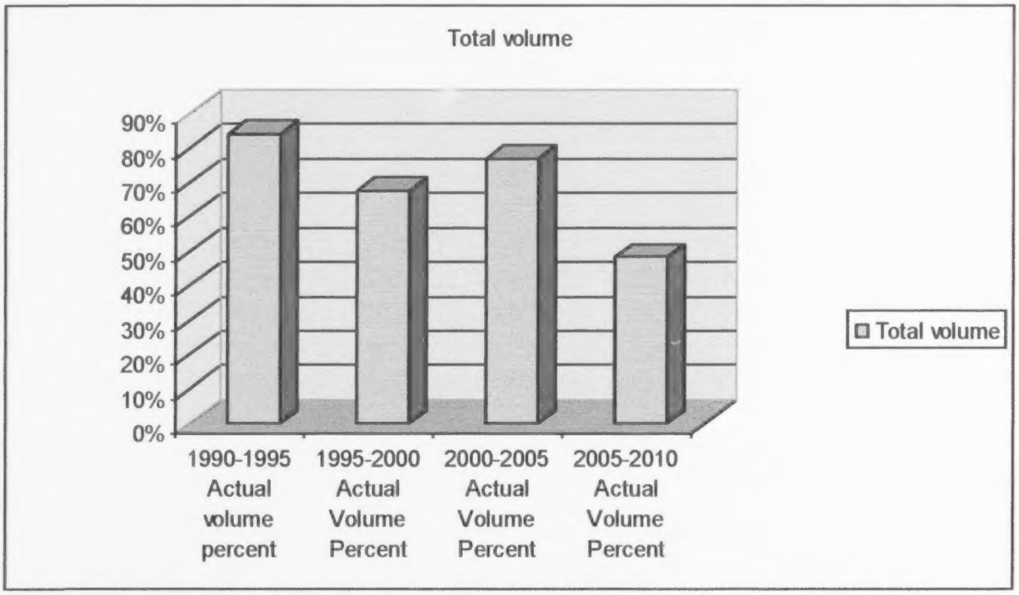


Figure 3. Actual volume versus planned volume by percent.

Over the past 3 terms, spruce volumes harvested has varied from 80% to 77% of planned volumes (857.68 m^3 to 736.26 m^3) with the current plan at 57% (458.54 m^3), while the planned volumes have not varied significantly (959.93 m^3, 937.05 m^3 and 803.84 m^3 for the 1990-1995, 2000-2005 and 2005-2010 terms respectively) (all in '000's of m^3). Table AR-8 Summary of Harvest volume contains the detailed annualized numbers.

White birch has had the least amount of volume harvested versus the planned volume. There is currently limited market for white birch. Columbia Forest Products has been the traditional birch user on the Kenogami with a small operation harvesting veneer quality stems. The remainder of the birch when harvested has generally been harvested for fuelwood purposes.

As with the harvest area, the spruce and pine forest units have been those that have consistently realized their volumes versus the planned volumes, with the exception of 2005-2010 term due to the curtailment of operations as explained in Section 4.1. During the 2005-2010 FMP, it was found internally that the volumes realized on average were approximately 20% lower than those predicted by the yield curves and stand listings. This could be due to the older inventory, the amount of insect damage that had caused mortality as well as yield curves that were slightly optimistic for some forest units.

With the actual volumes, the plan objective have has been affected was from B1 (To provide a sustainable, consistent, and economically viable supply of timber to the local industry of individuals, acquired through environmentally sound practices and to promote the efficient utilization of available wood fibre). The higher predicted yields from the forest and the lower actual realized volumes affected this objective as operations were geared towards the higher volume and when not realized, resulted in some economic issues. As the entire area of the plan was not harvested, there were severe local economical repercussions on the local communities that were depending on the harvesting operations for employment.

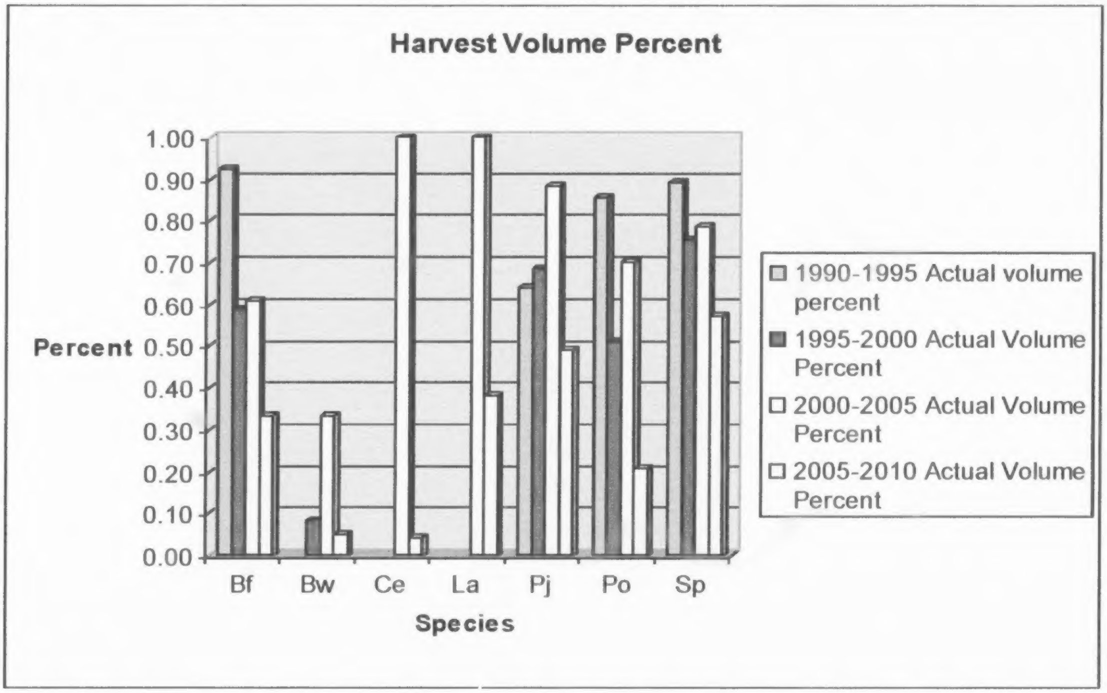


Figure 4. Harvest volume by species versus planned, by percent.

Upon examining the trends of the area and volume relationship, with the exception of 1990-1995, the percent of harvest area and volume are almost identical. This demonstrates that the area and volume planned are correct. As in, the amount of area harvested did realize the volume of wood that was anticipated to be achieved from the area.

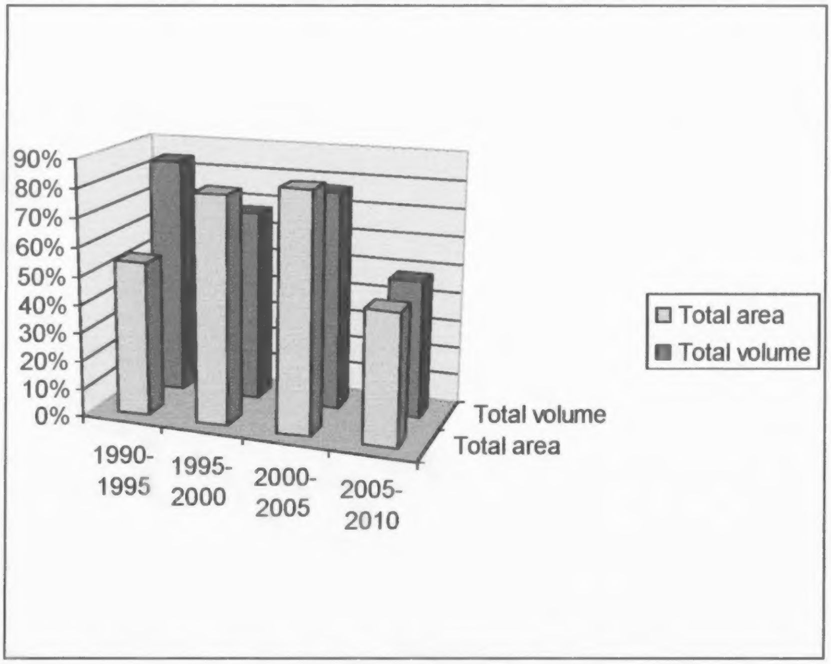


Figure 5. Harvest Area versus Harvest Volume by percent.

4.1.3 Renewal and Maintenance

Renewal activities ranged from 57% to 105% of planned for natural regeneration, and from 82% to 111% for artificial regeneration. During the 2005-2010 term, 111% of planned artificial regeneration activity was carried out. Overall, total renewal was 82%, 77%, 81% and 98% for terms between 1990 and 2005 inclusive. The lowest treatment was natural regeneration in 1995-2000 with 57% of planned declaration taking place. This may have been due to the move towards CLAAG (Careful logging around advanced growth) harvesting where the area needs time between harvest and natural declaration to determine if the area is successful in regeneration or requires retreatment via planting.

In 2000-2005, 105% of planned natural regeneration and 81% artificial regeneration took place. This is in part due to a concentrated effort to move towards better treatment of sites. The mechanical site preparation is also low for that year at 63% due to the same philosophy.

Mechanical site preparation was high in 1995-2000 at 96% of planned as there was a some site preparation that may have been done on marginally required sites where they could have been left for natural regeneration or planting without site preparation. In the 2005-2010 term, only 39% of planned site preparation took place. This was due to the curtailment of the harvest operation and subsequent lack of ground to treat as well as the lack of funds in the Forestry Renewal Trust Fund.

Area that has undergone tending treatment has been reduced from 77% in 1990-1995 to 40% in 2000-2005. It increased to 51% in 2005-2010 but the area planned for treatment is 36% less than the amount planned during1990-1995. If using the planned 1990-1995 amount, it would be 32% of that terms planned. There were pre-commercial thinning operations between 1990 and 2000. The planned versus actual was 43%, 76% and 63% respectively. There were no pre-commercial thinning activities during the 2005-2010 term.

Table AR-9 Summary of Planned and Actual Renewal, Tending and Protection Operations is included with the annualized numbers.

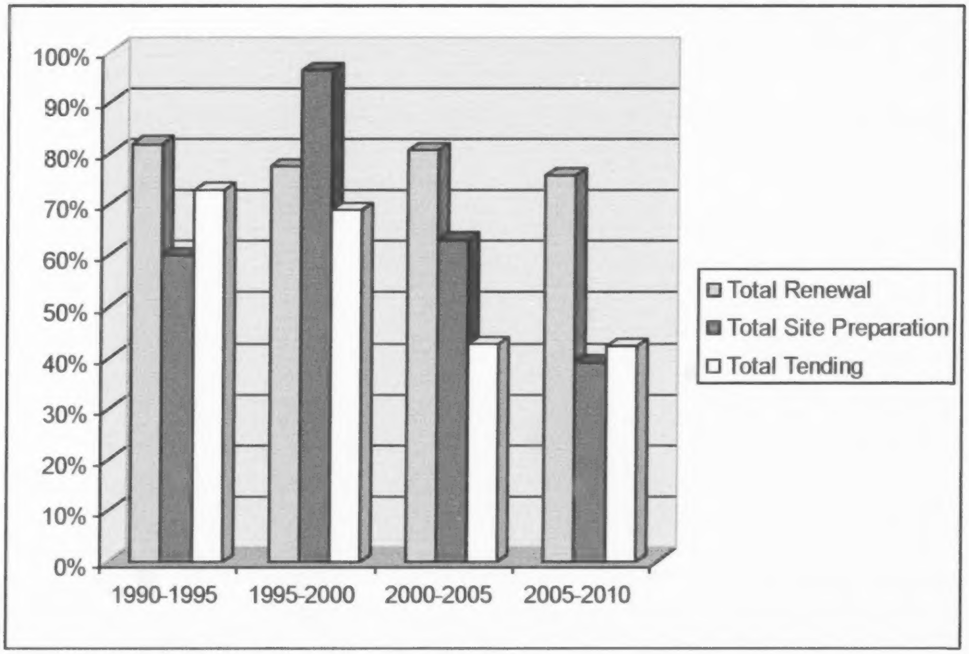


Figure 6. Total regeneration treatment versus planned, by percent.

Objective D1 to ensure every forest stand depleted is renewed, and tended as required, using the most appropriate and cost effective silvicultural knowledge and technology to achieve the desired future forest condition, was the objective affected by the difference in planned versus actual treatment. Over time, more fitting silvicultural treatments have been applied and more cost efficient natural regeneration (CLAAG) techniques have been employed. Aerial spray requirements have been reduced from 1990 levels and are less that 35% of the total treatments.

Table AR-9 Summary of Planned and Actual Renewal, Tending and Protection Operations is included with this report.

4.1.4 Harvest and Regeneration

The harvest and regeneration trends have increased from the 1990-95 term. This particular term is low with 64% of the area successfully regenerated. During this period, the OMNR was responsible for renewal activities on the Geraldton Company Management Unit (the Kenogami Forest is comprised of the previous Geraldton, Nakina and Longlac Management Units) and was also providing funding for the regeneration activities on all the Management Units. This may have limited the level of renewal activities that took place on the Forest due to budget constraints. The Geraldton Company Management Unit was still under Crown management until the Sustainable Forest Licence (SFL) was signed in 1998 when it was amalgamated with the other 2 Management Units and they became the Kenogami Forest. There were areas classified as "Z" class lands that the Company, upon taking over the silvicultural responsibilities and signing the SFL, was not responsible for any further regeneration activity. They have since been surveyed and the majority has been put back into the productive landbase. Currently there are only 253 ha not surveyed and the majority of these have been retyped back into the productive landbase with the 2005 FRI. The Forest Renewal Trust Fund was established at the time of SFL establishment, and the Company became responsible for all renewal and maintenance activities. After this point in time, 85% of the harvest area has been successfully regenerated during the past 2 terms (1995-00 and 2000-05).

The current 2005-2010 term has 45% of the area successfully regenerated as renewal activities that have taken place are from the previous term as well as the current term. The renewal activities are still continuing into the 2010-11 plan and some will also be treated in the 2011-2021 FMP.

Over the past terms, the forest unit definitions have changed. Some forest units were not in existence and others have been amalgamated over the past terms and the area from these forest units is now contained within other forest units. This has caused difficulty in determining the original forest unit that was treated. As an example, the HrdMx forest unit was not in existence until 2005-2010. The SpPur forest unit during the 1995-00 term has 207% of the area harvested successfully regenerated and during 1990-95 has 150% successfully regenerated. This is due during the depletion updating exercise in the past where the area depleted would be retyped as SpPur and this inflates the area numbers for this forest unit.

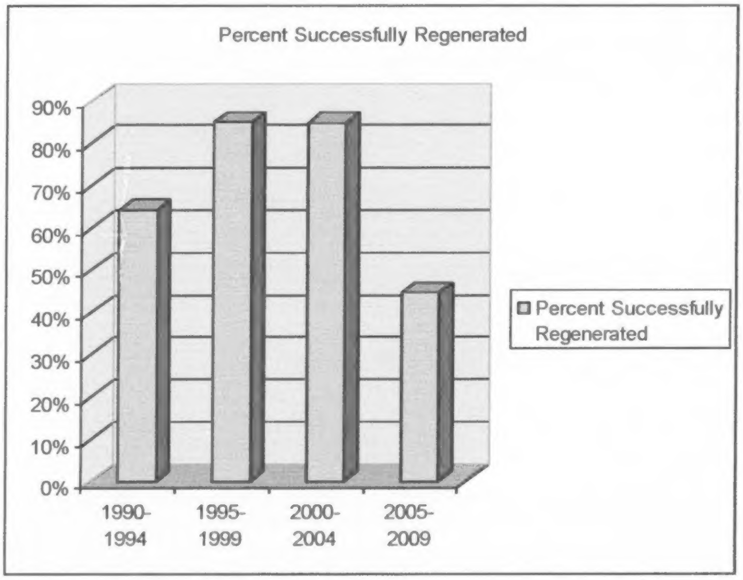


Figure 7. Harvest and Regeneration

4.1.5 Forest Condition

The forest condition has changed slightly over the past terms. The numbers used for plan end are those from the new FRI. The new FRI was used as it gives an up-to-date picture of how the forest is changing, especially after the spruce budworm infestation of the late 1980's and early 1990's that has resulted in the south end of the licence showing severe sign of mortality and stand change that is not possible to determine with the 1988 FRI used for the previous plans. The forest inventory has not been updated with the more recent harvest activity and therefore can not provide updated numbers. This delay is due to the economic difficulties of BFPL and subsequent staff reductions.

As seen in the figure below, most forest units are moving towards the desired projection in the 2005-2010 plan.

- BfDom is decreasing;
- BwDom is increasing toward the medium target of 2025;
- ConMx increased from plant start and plan end. This is due to the new inventory and forest unit definition changing over the last term;
- HrdMx is lower than the 2000-2005 term but increased at plan end and is higher than the desired medium term projection;
- OCLow PoPur, SPoor and SpPur have all increased with the new FRI at plan end 2010 and are higher than the medium term projections;
- PjSMx has increased but is working towards the long-term projection;
- PjPur decreased from 1995-2000 plan to plan end 2010;
- SpLoR has decreased but this is a function of the new FRI where it has classified more area lowland;
- SPoor has also increased and will have to decrease to meet the medium and long-term projections;
- SpPur was decreasing to meet the medium term projection but the new inventory has increased the amount of area within this forest unit.

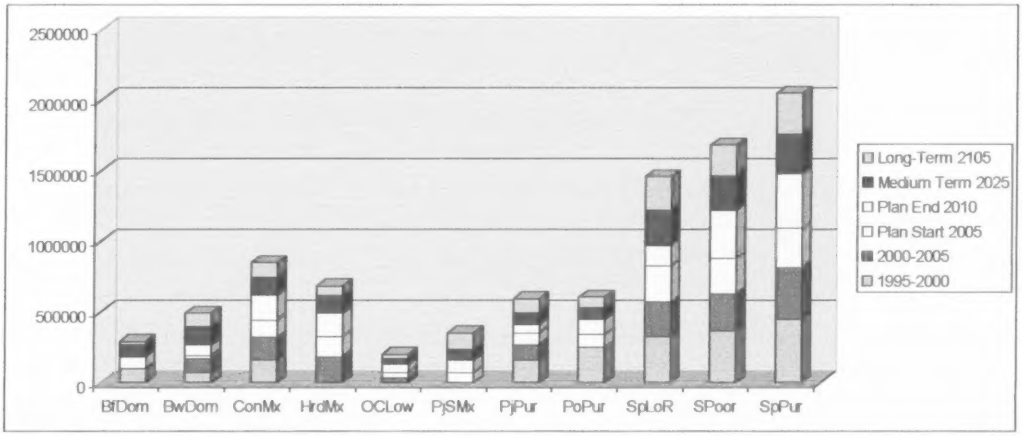


Figure 8. Forest Unit by area

4.1.6 Habitat for Species at Risk and Selected Wildlife Species

Table AR-12 presents the wildlife habitat for the current plan and the previous three plans. Not all species are now tracked in SFMM therefore Plan end at 2010 numbers cannot be determined for all listed species. There are only 6 of the original 20 species (or species requirements such as winter), that are currently tracked in SFMM. These species include Caribou, Caribou (winter), Marten, Moose, Moose (winter) and Pileated woodpecker.

The values from earlier plans seem extremely low as the preferred habitat areas are only available for the Kenogami Forest and not any of the former Management Units. Looking at values from Plan start 2005 to Plan end 2010:

- Caribou habitat has increased from 729,357 ha to 973,520 ha (33%);
- Caribou (winter) habitat has increased from 280,812 ha to 323,452 ha (15%);

- Marten habitat has decreased from 527,637 ha to 452,722 ha (86% of plan start);
- Moose habitat has increased to 357,557 ha to 407,953 ha (19%);
- Moose (winter) has increased from 427,278 ha to 509,636 ha (14%); and
- Pileated woodpecker has decreased from 113,013 ha to 70,903 ha (63% of plan start)

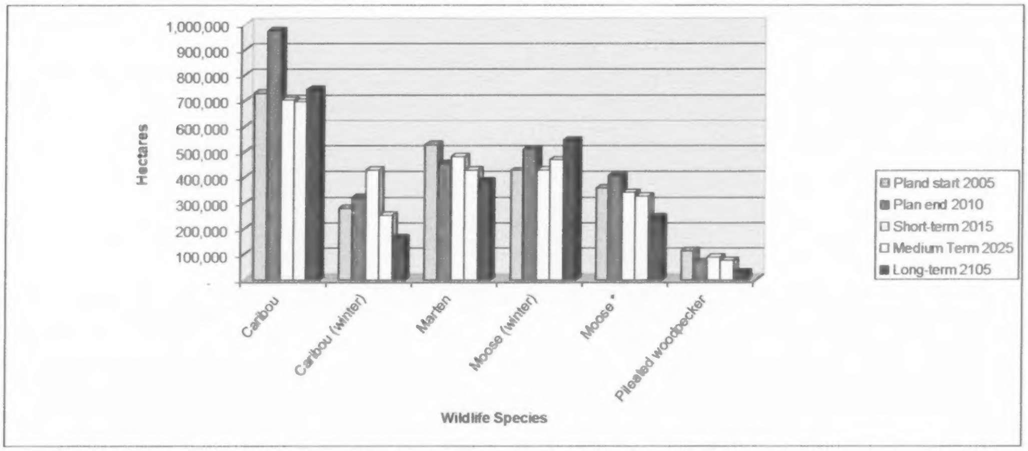


Figure 9. Habitat for Species at Risk and Selected Wildlife Species

The direction most of the species habitat is going in is beneficial to them. The increase in caribou habitat is especially important and there is currently the new Caribou Recovery Strategy and the Caribou Conservation Plan that must be followed. Caribou are identified as a Species at Risk and therefore have specialized management requirements surrounding them.

4.1.7 Monitoring and Assessment

The monitoring and assessment program was very successful. There was an overall average of 88% of the area surveyed that was regenerated successfully and 72% of that area was a silviculture success returning to the desired future forest unit.

Table AR-13 contains the Summary of Assessment of Regeneration and Silvicultural Success. This table was constructed form the previous years AR tables. One change that was necessary to report this information in the correct fashion was to convert the information from the Forest Operation Prescription (FOP) by forest unit to Silviculture Ground Rule (SGR) (by forest unit). The previous tables reported the regeneration by FOP due to direction received at the start of the 2005 FMP, the changes in forest unit definition, and the changes in the SGR's between plans. The majority of the areas that were surveyed were harvested 10 years previously under a completely different set of SGR's. At that time, the treatment that was applied to achieve the desired future forest condition was acceptable, however, the SGR's and subsequent treatments and future forest units that were acceptable then, have not been carried through to the 2005-2010 FMP. This may change their classification from silvicultural success to regeneration success. To account for this oversight during SGR development, there is a row added to each forest unit in AR-13 under the column Silvicultural Ground Rules stating 'Other'. This row cumulates the other FOP's that were used in that forest unit but cannot be associated with a currently existing SGR.

The area reported under the column Area Not Successfully Regenerated are those areas that have not met the free-to-grow requirements. The majority of these areas have not met the height requirement and require more time to reach the height requirement.

4.2 Analysis of Forest Disturbances

The area harvested and new natural disturbances have had an effect on the achievement of the targets and objectives for landscape pattern. These have been slightly altered as the total planned harvest area has not been completely harvested over the past plan and there have not been any significant natural disturbances on the forest since the forest fire season of 1996 and the spruce budworm outbreak and subsequent dieback in the early 1990's.

Due to the curtailment of harvest operations during the 2005-2010 FMP, there has been an increase in the number of smaller harvest blocks than originally planned. This increased the number of smaller disturbances. A majority of these were harvest blocks that were in the process of being harvested with some others that had been left for winter harvesting or further summer harvest, due to ground conditions. Operations did not have the opportunity to complete these blocks and therefore left them partially harvested.

The Kenogami Forest has a caribou mosaic on the landscape that requires large cut patches with large leave patches to provide the required current and future habitat for the caribou. This mosaic approach makes it difficult to achieve the 80/20 guideline for landscape disturbances (80% of the disturbance size is less than 260 hectares and 20% of the disturbances are greater than 260 hectares). The Forest was predicted to be at 79/21 at plan end in 2010 when the planned disturbances were forecast. The result at plan end after actual depletions have taken place was 83/16 which exceeds the provincial guideline with 83% of the cuts smaller than 260 hectares.

The Caribou mosaic may be detrimentally affected by the change in disturbance size. The mosaic depends on the whole mosaic block being completely harvested to provide an even-aged future forest condition. This disturbance result and subsequent delay (most of the blocks that were not harvested were able to be put back into the landbase for future allocations) in harvesting these areas will increase the pressure to clean up the areas or not succeeding in finishing the blocks prior to moving in to the Caribou 'B' blocks during the next FMP at the risk of not providing the required habitat for caribou.

4.3 Analysis of Renewal and Tending Activities

Table AR-13 has been completed as an assessment of regeneration and silvicultural success and table AR-10 shows the harvest and regeneration trends.

A) Trends in Renewal and Tending

Renewal on the Kenogami Forest has been consistent over the past 3 terms at approximately 80% of the planned renewal activity. The tree plant and natural regeneration has continued, albeit in a reduced state in 2006, over the terms. The highest amount was during the current plan with 98% of the planned renewal activity taking place. The highest natural regeneration level was during the 2000-05 plan with 105% of planned area declared for natural regeneration. This in combination with the artificial regeneration resulted in 81% of planned activity taking place.

The seeding aspect of artificial regeneration is the area where the greatest difference in planned versus actual took place. As these areas are predicted at plan development, when actual site conditions are observed, it is found that seeding is not the most appropriate choice of regeneration activity. In most case, the areas not suitable for seeding will be planted instead as this will result in a greater level of regeneration success.

Site preparation has had a high of 96% in 1995-00 but has generally has been around 61%. Area is estimated during plan production and when the area is site inspected for site preparation, some areas do not require site preparation and can be planted without site preparation or left for natural regeneration. This results in the difference in planned versus the actual area treated. The current term is at a low of 39%.as there have been two years where there was no site preparation activity (due to the labour dispute and economic conditions).

The amount of tending that has been planned has gone down over the past terms, and the amount of actual tending taking place has decreased as well. The 1990-95 plan had a high of 6,295 hectares planned for tending with 2,544 hectares actually done to a low of 2,541 hectares planned in 2005-10 and only 1,300 hectares done. Regeneration treatments are more selective toward natural regeneration, stock selection, species and seeding resulting in a reduced need for large hectares of tending treatments. This is positive for the forest and also presents a positive image to the public that is opposed to herbicide tending treatments.

B) Expenditures on Renewal and Tending Operations

Expenditures have varied over the past term as there have been events that have occurred that have caused the expenditures to fluctuate year to year. The first year of the plan was under the Neenah Paper umbrella. During this time, some activities were under union contract resulting in a higher price for some activities. During the 2006/07 summer silviculture season, Neenah Paper woodlands was on strike with the Buchanan group taking over in late August. This particular year had a reduced tree plant operation, mechanical site preparation or chemical tending however regeneration assessments did occur.

Normal silviculture operations did occur in 2007-08 and 2008-09 and these years had approximately the same expenditures averaging $4,249 million. A full tree plant, site preparation and tending program occurred.

During 2009-10 there was a large tree plant that took place with just over 10 million seedlings planted. There were no site preparation or tending operations that took place. This was in part due to the funds available in the Forest Renewal Trust fund and the minimum balance required.

C) Harvest and Regeneration Trends

The terms 1995-99 and 2000-04 overall had 85% of the area successfully regenerated. During this period of time the Company took over the management of the silviculture program and the Forest Renewal Trust Fund was established. This allowed the Company to make decisions and budget appropriately for required silvicultural activities as opposed to waiting for the OMNR budget to be disclosed and tailor the program within that.

The current 2005-10 term has 45% of the area successfully regenerated. This will increase as the additional areas requiring treatment will occur in the 2010-11 and 2011-21 FMP periods.

To determine by forest unit what percent has been successfully regenerated over the past terms has been difficult. There have been changes and additions/reductions in forest units and changes to the forest unit definitions between the different terms.

Some forest unit results exceed the area harvested. During the depletion process used during several terms, when updating the forest cover, the depleted area was given a blanket forest unit, and this may not have reflected the original forest unit (i.e. the forest unit assigned would be one of a pure definition such as SpPur or PoPur). Subsequently when determining what area was regenerated by forest unit, it will exceed the area harvested.

To analyze this table, the Total rows provide a better representation of the overall percent successfully regenerated.

D) Trends in Silvicultural Success and Regeneration Success

There have been 54,874 hectares of area surveyed for silviculture and regeneration success during the 2005-10 term. Of this amount, 88% was successfully regenerated overall with 75% of the area surveyed a silvicultural success.

During the 2009-10 term, there was 1,019 hectares surveyed with 90% being a silvicultural success returning to the desired future forest unit and the remaining 10% a regeneration success, returning to a different forest unit.

There is also an 'Other' row that has been added by forest unit. This is for those Silvicultural Ground Rules that may have been applied in the past (as the areas surveyed are from the 1995-1999 FMP) and the SGR that was intended at that time was not carried forward and not reflected in the 2005-10 FMP. There are areas that are silvicultural successes based on the intention for that area at that time (as the SGR's at that time were not recorded). Any stand that had an applicable current SGR had that SGR applied for this exercise.

Overall, there has been effective renewal and tending operations taking place over the 2005-10 plan. With the challenges presented (e.g. labour disputes, change in SFL ownership and the economic climate), renewal and tending activities have been able to carry on with modifications but not to the detriment of the forest.

There have been some areas that may need improvement, such as evaluating the reduction in site preparation activities (that was partly driven by the economic situation), and potentially increasing the amount to include those marginal areas.

With the new caribou recovery strategy it may be necessary to increase the amount of tending area on the forest. The tending amount has decreased over the past terms however, with the ESA and Caribou Recovery Strategy, tending may have to increase to meet the requirements to reduce the amount of hardwood within stands and within the Caribou Mosaic.

4.4 Review of Assumptions in Modeling

Development of the 2005-10 FMP was based on a series of assumptions that were used during development of the long-term management direction and within the SFMM model.

Yield curve development is an ongoing model refinement challenge. With changes to the forest unit composition and the changing forest condition, this is an area that will continually be under improvement. Areas reserved from harvest and those areas converted to non-forest are also areas where work is updated on a continual basis with changing guidelines, uses for roadside debris and the road network use strategies (i.e. abandonment).were developed and the yields realized were closer than the previous 2000-05 FMP. This is difficult to determine as not all the blocks were completed or scaled to compare the predicted yield to the actual yield by forest unit.

Silviculturally, there were no pre-commercial thinning activities that took place as the FMP had indicated. Five hundred hectares of pre-commercial thinning was indicated to take place annually. This should not adversely affect the sustainability of the forest as the Kenogami is a predominately spruce forest with a small amount jack pine. The small amount of area indicated for thinning accounts for only approximately 0.03% of the forest area.

Silviculture expenditures (in millions of dollars) for T1 was expected to be $7,914 annually however, actual expenditures for the 2005-10 silviculture program amounted to an annual average of $2,910. The highest amount spend in one year was during 2005-06 with $5,421 which was $2,493 less than the FMP assumption.

4.5 Assessment of Objective Achievement

Table AR-14 contains the objectives from the 2005-10 FMP and the results obtained either during plan development or after plan implementation. Assessments are included in the table or elsewhere in the text of this trend analysis document.

A) Forest diversity

There were changes in forest structure and composition as the new FRI inventory provides an updated forest inventory. There was a significant reduction in the balsam fir dominated forest due to the insect infestation and subsequent die-back that occurred since the last inventory. This species is still present in the understory but does not occur in the overstorey in quantities large enough to dominate and warrant its own forest unit. The majority of this forest unit has shifted to the BwDom forest unit.

There was also a shift from SpLoR to SpPur. During the typing of stands for the new 2005 FRI, the interpretation of some marginal stands that were previously classified as lowland are now classified as upland. The accuracy of this will be tested during the 2011-21 FMP.

B) Social and Economic

From the information presented in AR-1 and AR-2 of this annual report and previous equivalent reports, the area and volume of the plans have not been fully harvested. This is explainable as during the recent term, the strike and economic conditions were unexpected. The 1990-95 term was an area based plan where the yield curves developed were underestimating the available volume per hectare resulting in less area but more volume realized.

The increased area for parks and other uses is of a concern. If this trend continues over time, there will be less area to supply the required volume to support the local mills.

The local communities were viable and stable with the implementation of the FMP. The downfall was the labour dispute and the unexpected duration of the economic climate.

C) Forest Cover

Habitat targets for the selected species were met during plan development. The indication from the new FRI also indicates that for those species being tracked, all are going in the desired direction to meet the long-term objectives.

D) Silviculture

Over the past term, not all planned renewal activities took place. The pre-commercial thinning of jack pine and the spacing of poplar did not take place. The poplar spacing was for a niche market that currently does not exist and the small amount of jack pine pre-commercial thinning that was scheduled is not enough to negatively impact long-term forest sustainability.

The renewal treatments that were implemented did produce the anticipated results. There was an expectation that the CLAAG areas would require supplemental planting to increase the stocking levels and this did occur.

Overall the forest did grow and develop generally as projected as seen in table AR-13 Summary of Regeneration and Silvicultural Success.

4.6 Determination of Sustainability

Overall the levels of objective achievement are within and moving towards, the desirable levels for the indicators. There are a few exceptions but these are due the new FRI inventory and the results from this. During plan development for the 2011-21 FMP, new targets and desired levels have been set based on the updated information.

Actual operations and results as reported in annual reports are consistent with the assumptions and projections in the model and forest management plan with the exception of the level of harvest over this term. The harvest has been lower than originally planned however this should not affect the sustainability of the forest.

There were no components of the independent forest audit action plan pertaining to objective achievement and sustainability that was required to be implemented.

The collective achievement of the management objectives and any required rationale for those that require explanation, were discussed throughout this document. Through implementation of planned operations, it is concluded that the sustainability of the Crown forest has been achieved.

MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: April 1, 2005 to March 31, 2010
ANNUAL REPORT: APRIL 1, 2009 to March 31, 2010

AR - 7: Summary of Planned and Actual Harvest Area

	Area (ha) - Annualized									
	PLANNED HARVEST			ACTUAL HARVEST			Current Plan			
	Past Plans			Past Plans					Projections	
									Medium-Term	Long-Term
Forest Unit	1990-1995	1995-2000	2000-2005	1990-1995	1995-2000	2000-2005	Planned Harvest	Actual Harvest	2025	2105
BfDom	1,201.20	1,136.60		500.60	709.50		327.80	212.78	1,661.00	853.00
BwDom	636.00	1,295.00	310.20	345.80	137.18	119.60	100.00	0.01	151.00	192.00
ConMx			1,453.60			1,195.40	1,300.00	648.92	1,240.00	1,134.00
HrdMx							1,292.80	378.76	1,369.00	324.00
OCLow		-	187.00		187.38	103.80	120.00	14.44	176.00	213.00
PFR			510.80			252.00		-		
PjSMx							1,131.80	769.16	896.00	1,785.00
PjPur	1,063.20	894.40	606.00	735.60	782.44	659.00	834.40	691.90	771.00	1,611.00
PoPur	2,994.40	3,027.20	2,314.20	1,968.60	2,330.52	2,035.00	1,205.40	485.24	1,043.00	418.00
SpLoR	4,030.00	2,030.80	2,270.20	1,672.40	1,800.90	2,007.00	3,137.40	1,240.46	2,027.00	2,986.00
SPoor	2,181.20	2,393.20	2,102.60	1,033.40	1,730.56	1,675.60	2,213.40	765.90	1,736.00	1,868.00
SpPur	4,569.60	4,766.20	2,660.00	2,821.40	3,885.68	2,314.40	2,334.00	1,516.46	950.00	1,745.00
Total	16,675.60	15,543.40	12,414.60	9,077.80	11,564.16	10,361.80	13,997.00	6,724.03	12,020.00	13,129.00

MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL 2005 TO MARCH 31, 2010
ANNUAL REPORT: April 1, 2009 to March 31, 2010

AR-8: Summary of Planned and Actual Harvest Volume

	Volume ('000 m^3) - Annualized									
	PLANNED HARVEST VOLUME			ACTUAL HARVEST VOLUME			Current Plan			
	Past Plans			Past Plans					Projections	
									Medium-Term	Long-Term
Species	**1990-1995**	**1995-2000**	**2000-2005**	**1990-1995**	**1995-2000**	**2000-2005**	**Planned Harvest**	**Actual Harvest**	**2025**	**2105**
Bf	116.63	-	105.49	107.68	55.68	64.41	38.33	12.81	111.40	68.59
Bw	-	-	3.04	5.87	0.60	1.02	14.98	0.76	22.53	11.08
Ce	-		0.01		0.00	0.06	0.87	0.04	2.74	4.24
La	-		0.85		1.14	1.66	8.42	3.22	12.97	14.19
Pj	362.90	-	172.92	232.72	186.98	153.31	198.83	97.98	252.79	432.49
Po	405.87		265.88	346.84	183.96	187.08	218.73	45.89	282.00	142.63
Sp	959.93		937.05	857.68	617.50	736.26	803.84	459.54	671.61	789.93
Hwd		365.89								
SPF		1,183.60								
Total	1,845.32	1,549.49	1,485.24	1,550.80	1,045.85	1,143.80	1,284.01	620.24	1,356.03	1,463.13

MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL 1, 2005 TO MARCH 31, 2010
ANNUAL REPORT: APRIL 1, 2009 TO MARCH 31, 2010

AR-9: Summary of Planned and Actual Renewal, Tending and Protection Operations

	Area (ha) - Annualized							
	PLANNED			ACTUAL			PLANNED	ACTUAL
	Past Plans			Past Plans			Current Plan	Current Plan
Operation	1990-1995	1995-2000	2000-2005	1990-1995	1995-2000	2000-2005	2005-2010	2005-2010
Renewal								
Natural Regeneration								
Clearcut Silvicultural System (even-aged)	5,274	5,419	3,346	4,313	3,109	3,503	5,092	4,169
Shelterwood Silvicultural System (even-aged)								
Selection Silvcultural System - Selection Harvest (uneven-aged)								
Artificial Regeneration								
Planting	4,154	4,524	8,165	4,048	5,158	6,137	6,052	5,074
Seeding	1,930	1,436	758	904	551	238	481	262
Scarification	26	26		52	-			
Total Artificial	6,110	5,986	8,922	5,004	5,708	6,375	6,533	5,335
Total Renewal	**11,384**	**11,405**	**12,269**	**9,317**	**8,818**	**9,878**	**11,625**	**9,504**
Site Preparation (mechanical, chemical, prescribed burn)								
Mechanical	5,820	4,825	4,750	3,874	4,490	2,976	3,414	1,896
Chemical	670	280	530	173	274	375	1,015	75
Prescribed burn	534	122	511	164	260	291	1,076	54
Total Site Preparation	**7,024**	**5,227**	**5,791**	**4,211**	**5,025**	**3,642**	**5,506**	**2,024**
Tending								
Cleaning	5,200	4,006	6,295	3,995	2,712	2,544	2,541	1,737
Spacing, Pre-Commercial Thinning, Improvement Cutting								
Clearcut and Shelterwood Silvicultural Systems (even-aged)	700	577	700	299	439	438	536	
Selection Silvicultural System (uneven-aged)								
Total Tending	**5,900**	**4,583**	**6,995**	**4,294**	**3,151**	**2,982**	**3,077**	**1,300**
Protection (Insect Pest Control)				886				

no salvage included

MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL 1, 2005 TO MARCH 31, 2010
ANNUAL REPORT: APRIL 1, 2009 TO MARCH 31, 2010

AR-10: Summary of Harvest and Regeneration Trends

		Term			
Forest Unit		**1990-1994**	**1995-1999**	**2000-2004**	**2005-2009**
BfDom	**Harvest/salvage (ha)**	3,052	3,678		1,151
	Surveyed (ha)	95	310	176	
	Regenerated (ha)	15	372	3,637	687
	Unavailable for Regeneration (ha)	31	37	-	12
	Un-surveyed (ha)	2,957	3,368	(176)	1,151
	Percent FU Successfully Regenerated	0%	10%		60%
BwDom	**Harvest/salvage (ha)**	710	707	2,296	28
	Surveyed (ha)	152	20		
	Regenerated (ha)	523	182	139	
	Unavailable for Regeneration (ha)	7	7	23	0
	Un-surveyed (ha)	**558**	**687**	**2,296**	**28**
	Percent FU Successfully Regenerated	74%	26%	6%	0%
ConMx	**Harvest/salvage (ha)**			7,191	3,341
	Surveyed (ha)	2,518	1,564	1,032	
	Regenerated (ha)	467	2,005	3,778	1,762
	Unavailable for Regeneration (ha)	-	-	72	33
	Un-surveyed (ha)	(2,518)	(1,564)	6,159	3,341
	Percent FU Successfully Regenerated			53%	53%
HrdMx	**Harvest/salvage (ha)**				1,969
	Surveyed (ha)	1,494	1,285	296	
	Regenerated (ha)	762	1,086	4,479	967
	Unavailable for Regeneration (ha)	-	-	-	20
	Un-surveyed (ha)	(1,494)	(1,285)	(296)	1,969
	Percent FU Successfully Regenerated				50%
OCLow	**Harvest/salvage (ha)**	601	958	528	56
	Surveyed (ha)	145	29	1	
	Regenerated (ha)	169	31	440	4
	Unavailable for Regeneration (ha)	6	10	5	1
	Un-surveyed (ha)	456	929	527	56
	Percent FU Successfully Regenerated	28%	3%	84%	7%
PjSMx	**Harvest/salvage (ha)**				3,667
	Surveyed (ha)	90	1,356	337	
	Regenerated (ha)	76	1,276		
	Unavailable for Regeneration (ha)	-	-	-	37
	Un-surveyed (ha)	(90)	(1,356)	(337)	3,667
	Percent FU Successfully Regenerated				0%

PjPur	**Harvest/salvage (ha)**	4,448	5,394	5,253	3,910
	Surveyed (ha)	868	1,170	171	
	Regenerated (ha)	953	1,063	3,739	2,689
	Unavailable for Regeneration (ha)	44	54	53	39
	Un-surveyed (ha)	3,580	4,224	5,082	3,910
	Percent FU Successfully Regenerated	22%	20%	72%	69%
PoPur	**Harvest/salvage (ha)**	12,226	11,994	10,752	2,428
	Surveyed (ha)	869	357	21	
	Regenerated (ha)	3,954	334	5,686	891
	Unavailable for Regeneration (ha)	122	120	108	24
	Un-surveyed (ha)	11,357	11,637	10,731	2,428
	Percent FU Successfully Regenerated	33%	3%	53%	37%
SpLoR	**Harvest/salvage (ha)**	7,490	9,382	10,813	6,104
	Surveyed (ha)	2,368	1,710	1,063	38
	Regenerated (ha)	561	2,128	8,975	2,185
	Unavailable for Regeneration (ha)	75	94	108	61
	Un-surveyed (ha)	5,122	7,672	9,750	6,066
	Percent FU Successfully Regenerated	8%	23%	84%	36%
SPoor	**Harvest/salvage (ha)**	7,404	8,935	9,522	3,772
	Surveyed (ha)	79	174	44	
	Regenerated (ha)	69	725	7,265	1,501
	Unavailable for Regeneration (ha)	74	89	95	38
	Un-surveyed (ha)	7,325	8,761	9,478	3,772
	Percent FU Successfully Regenerated	1%	8%	77%	40%
SpPur	**Harvest/salvage (ha)**	18,397	20,810	14,084	8,126
	Surveyed (ha)	26,798	32,794	4,627	
	Regenerated (ha)	27,402	42,606	12,558	4,571
	Unavailable for Regeneration (ha)	184	208	141	81
	Un-surveyed (ha)	(8,401)	(11,984)	9,457	8,126
	Percent FU Successfully Regenerated	150%	207%	90%	57%
Not Know (PFR, ?)	**Harvest/salvage (ha)**	725			
	Surveyed (ha)				
	Regenerated (ha)	29	300	0	
	Unavailable for Regeneration (ha)	7	-	-	-
	Un-surveyed (ha)	725	-	-	-
	Percent FU Successfully Regenerated	4%			
Total	**Harvest/salvage (ha)**	55,053	61,858	60,439	34,552
	Surveyed (ha)	35,476	40,769	7,768	38
	Regenerated (ha)	35,006	51,988	50,694	15,256
	Unavailable for Regeneration (ha)	551	619	604	346
	Un-surveyed (ha)	19,577	21,089	52,671	34,514
	Percent Successfully Regenerated	**64%**	**85%**	**85%**	**45%**

MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL 1, 2005 TO MARCH 31, 2010
ANNUAL REPORT: APRIL 1, 2009 TO MARCH 31, 2010

AR-11: Summary of Forest Condition for the Available Managed Crown Productive Forest

		Age (ha)						
		Past Plans			**Current Plan 2005-2010**			
							Projections	
Forest Unit	**Age/Condition Class**	**1990-1995**	**1995-2000**	**2000-2005**	**Plan Start 2005**	**Plan End 2010**	**Medium Term 2025**	**Long-Term 2105**
BfDom	Depleted		510			1,064		
	Below Regen Standard							
	0-20		1,711		6,478	6,478	1,830	3,072
	21-40		17,074		4,692	4,692	6,308	6,092
	41-60		37,358		26,684	26,684	7,527	8,458
	61-80		30,207		27,712	27,298	26,435	7,323
	81-100		7,706		9,616	9,392	29,355	2,377
	101-120		3,624		4,508	4,330	7,378	991
	121-140		964		2,934	2,799	1,158	28
	141-160				1,419	1,415	30	1
	161-180				228	[illegible]		
	181-200				47	[illegible]		
	201+				9	9		
	Forest Unit Subtotal	-	99,154	-	84,327	84,327	80,021	28,342
BwDom	Depleted		2,257			0		
	Below Regen Standard							
	0-20		3,624	3,958	3,245	3,245	21,129	30,389
	21-40		3,308	4,614	825	825	23,701	31,871
	41-60		9,516	10,199	1,336	1,336	31,917	20,455
	61-80		13,615	14,915	4,779	4,779	19,283	11,965
	81-100		23,012	22,976	6,465	6,465	15,186	6,161
	101-120		11,968	25,445	7,341	7,341	6,418	1,048
	121-140		1,718	11,998	2,376	2,376	5,927	311
	141-160			1,712	160	160	2,457	71
	161-180			75		-	1,138	3
	181-200					-		
	201+					-		
	Forest Unit Subtotal	-	69,018	95,892	26,528	26,528	127,156	102,275
ConMx	Depleted					3,164		
	Below Regen Standard							
	0-20			10,001	24,467	24,466	21,129	30,389
	21-40			26,801	35,255	35,240	23,701	31,871
	41-60			36,316	9,259	9,259	31,917	20,455
	61-80			33,768	9,785	9,709	19,283	11,965
	81-100			14,653	11,783	11,134	15,186	6,161
	101-120			13,726	13,984	13,157	6,418	1,048
	121-140			13,957	11,541	11,013	5,927	311
	141-160			7,091	5,896	5,493	2,457	71
	161-180			780	791	128	1,138	3
	181-200			15	60	60		
	201+			30	33	33		
	Forest Unit Subtotal	-	161,993	157,139	122,855	122,855	127,156	102,275

HrdMx	Depleted					1,844		
	Below Regen Standard							
	0-20			32,863	20,446	20,445	23,799	13,926
	21-40			37,256	33,333	33,320	20,001	18,095
	41-60			18,374	20,081	20,080	31,312	22,954
	61-80			28,301	15,246	15,143	22,319	12,071
	81-100			24,014	17,090	16,746	13,678	2,361
	101-120			21,670	20,360	19,982	5,125	271
	121-140			18,358	10,428	10,099	4,011	3
	141-160			5,857	3,161	2,486	914	
	161-180			39	90	90		
	181-200					-		
	201+							
	Forest Unit Subtotal	-	-	186,732	140,235	140,235	121,159	69,682
OCLow	Depleted					54		
	Below Regen Standard							
	0-20			735	2,137	2,137	3,398	6,121
	21-40			94	240	240	2,084	5,085
	41-60			252	474	474	236	4,396
	61-80			272	499	499	585	3,595
	81-100			580	527	527	486	3,074
	101-120			2,315	2,530	2,529	1,851	2,789
	121-140			8,214	8,768	8,727	11,999	3,776
	141-160			12,569	13,962	13,954	6,629	3,963
	161-180			7,838	10,076	10,072	6,438	1,140
	181-200			40	44	44	4,859	195
	201+			119	136	136	4	51
	Forest Unit Subtotal	-	-	33,027	39,392	39,392	38,569	34,187
PjSMx	Depleted					3,667		
	Below Regen Standard							
	0-20				10,671	10,670	26,140	36,200
	21-40				12,279	12,278	10,361	31,739
	41-60				4,335	4,335	13,935	28,075
	61-80				9,069	8,988	11,450	16,298
	81-100				10,821	10,254	6,853	4,069
	101-120				9,104	8,151	4,292	523
	121-140				8,598	6,917	1,953	15
	141-160				4,828	4,487	1,321	
	161-180				668	626	286	
	181-200				10	10		
	201+							
	Forest Unit Subtotal	-	-	-	70,383	70,383	76,590	116,919
PjPur	Depleted		13,519			3,276		
	Below Regen Standard							
	0-20		24,714	18,431	12,208	12,207	27,535	29,828
	21-40		13,451	20,251	18,031	18,028	11,814	33,190
	41-60		16,675	9,460	4,844	4,843	17,299	25,817
	61-80		43,207	26,073	20,879	20,541	4,595	7,382
	81-100		19,761	13,830	13,527	12,755	14,178	3,481
	101-120		17,877	7,920	6,051	5,182	3,996	346
	121-140		12,099	7,607	4,792	4,227	1,353	15
	141-160			3,035	1,617	890	1,042	
	161-180			361	233	233		
	181-200			48	17	17		
	201+							
	Forest Unit Subtotal	-	161,303	107,016	82,198	82,198	81,813	100,058
PoPur	Depleted		30,804			2,247		
	Below Regen Standard							
	0-20		21,519		25,523	25,522	23,684	15,295
	21-40		29,554		13,831	13,824	24,943	21,657
	41-60		18,803		7,656	7,656	13,514	24,101
	61-80		42,304		13,398	13,343	7,417	9,712
	81-100		42,436		14,177	13,597	7,867	3,064
	101-120		40,766		10,859	9,522	3,416	796
	121-140		22,904		5,652	5,475	1,936	5
	141-160				961	871	410	
	161-180						1	
	181-200							
	201+							
	Forest Unit Subtotal	-	249,090	-	92,057	92,057	83,190	74,628

SpLoR	Depleted		21,486			5,996		
	Below Regen Standard							
	0-20		2,115	17,693	34,262	34,262	70,933	32,059
	21-40		1,465	2,131	4,973	4,972	33,516	26,681
	41-60		6,325	3,291	3,449	3,449	4,832	38,262
	61-80		17,360	8,131	8,468	8,467	3,392	57,099
	81-100		18,643	10,246	13,211	12,371	8,893	65,227
	101-120		33,106	15,926	19,897	19,230	42,106	10,290
	121-140		228,074	35,165	32,701	31,203	46,683	1,061
	141-160			88,418	76,533	74,810	10,705	473
	161-180			57,331	64,908	63,733	9,091	189
	181-200			596	648	557	19,223	
	201+			159	228	228	121	
	Forest Unit Subtotal	-	328,574	239,087	259,279	259,279	249,496	231,342
SPoor	Depleted		34,297			3,755		
	Below Regen Standard							
	0-20		1,058	13,154	22,608	22,608	48,332	26,674
	21-40		364	3,276	4,619	4,619	22,155	25,251
	41-60		11,936	5,953	4,646	4,646	4,503	35,543
	61-80		17,978	14,308	15,767	15,761	4,579	47,845
	81-100		15,926	9,384	10,266	10,266	15,437	44,392
	101-120		59,969	26,426	24,875	24,657	10,265	20,241
	121-140		226,176	62,975	53,792	52,100	38,943	6,791
	141-160			78,571	68,275	66,945	51,944	5,984
	161-180			44,452	45,118	44,613	28,943	2,939
	181-200			880	830	825	16,362	1,255
	201+			324	388	388	181	345
	Forest Unit Subtotal	-	367,704	259,703	251,183	251,183	241,645	217,261
SpPur	Depleted		37,907			7,151		
	Below Regen Standard							
	0-20		20,315	155,872	148,238	148,238	52,671	83,794
	21-40		10,172	11,690	7,871	7,865	143,816	50,865
	41-60		30,192	11,015	4,478	4,476	9,146	40,123
	61-80		56,508	27,622	16,233	16,230	8,978	43,827
	81-100		86,067	32,908	24,940	24,263	24,831	42,249
	101-120		94,585	42,614	29,099	27,634	23,070	24,786
	121-140		114,240	44,102	26,416	24,411	9,262	663
	141-160			31,493	18,680	15,888	5,737	300
	161-180			5,172	3,238	3,037	4,070	178
	181-200			45	33	33	419	6
	201+			29	29	29		2
	Forest Unit Subtotal	-	**449,986**	**362,560**	**279,254**	**279,254**	**282,000**	**286,794**
	Total	-	**1,886,822**	**1,441,157**	**1,447,692**	**1,447,692**	**1,508,793**	**1,363,760**

MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL1, 2005, MARCH 31, 2010
ANNUAL REPORT: APRIL 1, 2009 TO MARCH 31, 2010

AR-12 Summary of Habitat for Species at Risk and Selected Wildlife Species

	Area of Habitat (ha)							
	Past Plans			Current Plan 2005-2010				
					Projections			
Wildlife Species	1990-1995	1995-2000	2000-2005	Plan Start 2005	Short Term 2015	Medium Term 2025	Long-term 2105	Plan End 2010
American kestrel		381	96	9,632	14,239	13,066	14,989	
American redstart		1,504	1,763	176,309	170,567	172,071	123,323	
Boreal chickadee		2,607	6,955	695,482	630,934	558,671	523,703	
Boreal red-backed vole		4,895	4,229	422,861	376,401	329,440	304,690	
Caribou		7,596	7,294	729,357	703,351	696,624	743,188	973,520
Caribou (winter)		1,082	2,808	280,812	429,944	252,946	162,532	323,452
Connecticut warbler *		4,406	4,037	403,697	429,944	445,010	427,265	
Golden crowned kinglet		1,919	2,097	209,704	202,761	195,784	183,141	
Great grey owl		2,607	4,583	458,345	40,084	343,617	327,694	
Marten		6,834	5,276	527,637	481,279	428,527	386,196	452,722
Moose (winter)		4,117	4,273	427,278	430,186	470,025	545,013	509,636
Moose *		5,400	3,576	357,557	342,240	325,389	244,786	407,953
Northern flying squirrel *		9,498	4,875	487,526	425,723	373,216	286,657	
Pileated woodpecker		903	1,130	113,013	90,355	76,938	29,681	70,903
Snowshoe hare		2,051	1,756	175,636	159,141	151,898	101,465	
Spruce grouse		1,571	1,034	103,428	113,718	125,813	154,468	
Swainsons thrush		2,334	2,825	282,509	253,718	241,841	146,032	
White-tailed deer		1,391	1,726	172,584	161,556	155,834	115,888	
White-tailed deer (winter)		1,512	2,253	225,303	211,618	198,181	116,199	
White-throated sparrow *		10,361	7,020	701,986	660,702	594,038	478,962	

* Since the Northwest Region Wildlife Habitat Matrix does not rank "preferred" habitat for these species, then "preferred" plus

The habitat values from 1995 were not available. The actual values in the year 2000 have been taken from Table FMP-5 in the 2000-05 Kenogami Forest FMP. The preferred habitat areas is only available for the Kenogami Forest, and not any of the

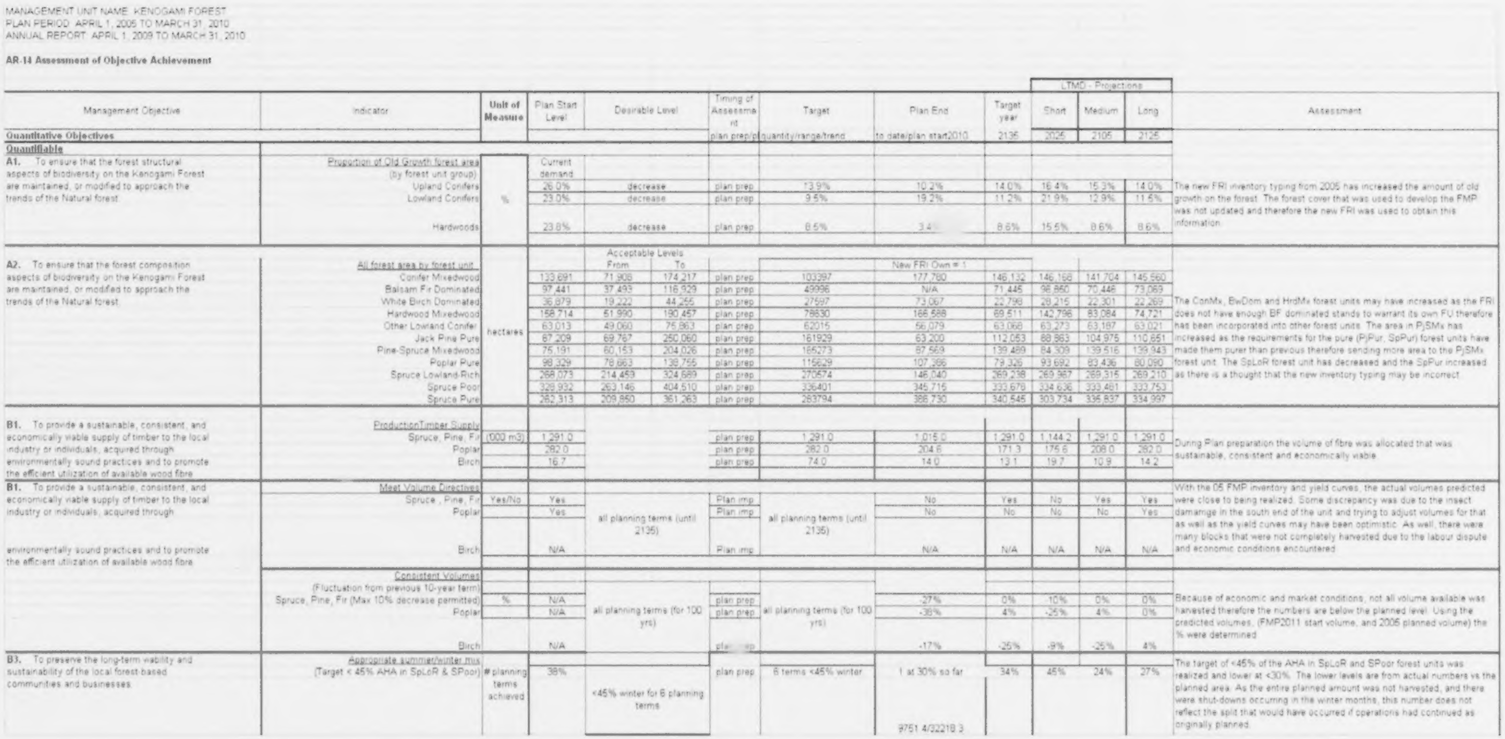
Not all species are now tracked in SFMM, therefore Plan End 2010 numbers cannot be determined for all listed species.

MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL 1, 2005 TO MARCH 31, 2010
ANNUAL REPORT: APRIL 1, 2009 TO MARCH 31, 2010

AR-13 Summary of Assessment of Regeneration and Silvicultural Success

		Area Assessed				
		Area Successfulluy Regenerated			Area Not Successfully Regenerated	Total Area Assessed
Forest Unit	Silvicultural Ground Rule	Projected Forest Unit	Other Forest Unit	Total		
Harvest						
BfDom	BfDom2	254	372	626	321	947
	BfDom3	231	14	245	-	245
	BfDom5	967	219	1,186	-	1,186
	Other	454	384	838	6	845
	Forest Unit Subtotal	**1,906**	**990**	**2,896**	**327**	**3,223**
BwDom	BwDom2		6	6	-	6
	Forest Unit Subtotal	-	**6**	**6**	-	**6**
ConMx	ConMx3	306	-	306	-	306
	ConMx4	87	53	140	-	140
	ConMx5	358	-	358	-	358
	ConMx6	1,601	977	2,578	-	2,578
	ConMx7	201	-	201	-	201
	Other	71	-	71	79	150
	Forest Unit Subtotal	**2,624**	**1,030**	**3,654**	**79**	**3,733**
HrdMx	HrdMx2	1,202	38	1,240	88	1,328
	HrdMx3	425	24	448	-	448
	HrdMx4	191	5	196	-	196
	HrdMx6	271	-	271	-	271
	Other	1,018	532	1,551	67	1,618
	Forest Unit Subtotal	**3,106**	**599**	**3,705**	**154**	**3,859**
OCLow	Other	211	-	211	17	228
	Forest Unit Subtotal	**211**	-	**211**	**17**	**228**
PjPur	PjPur2	1,514	315	1,830	20	1,850
	Other	933	107	1,040	-	1,040
	Forest Unit Subtotal	**2,447**	**422**	**2,870**	**20**	**2,890**
PjSMx	PjSMx2	1,259	261	1,521	255	1,776
	PjSMx3	267	29	297	-	297
	PjSMx5	71	6	77	-	77
	Other	440	98	538	59	597
	Forest Unit Subtotal	**2,038**	**395**	**2,433**	**314**	**2,747**
PoPur	PoPur2	1,267	198	1,466	-	1,466
	PoPur3	860	-	860	92	952
	PoPur4	129	-	129	-	129
	Other	1,608	199	1,806	48	1,854
	Forest Unit Subtotal	**3,865**	**397**	**4,262**	**139**	**4,401**
SpLoR	SpLoR1	2,199	663	2,862	1,609	4,471
	SpLoR2	829	239	1,068	259	1,327
	Other	908	123	1,030	85	1,116
	Forest Unit Subtotal	**3,935**	**1,025**	**4,960**	**1,953**	**6,913**
SPoor	SPoor2	5	100	104	26	130
	SPoor3	134	182	316	7	324
	Other	1,697	54	1,751	572	2,323
	Forest Unit Subtotal	**1,836**	**335**	**2,171**	**605**	**2,777**
SpPur	SpPur2	215	24	239	36	274
	SpPur3	2,098	680	2,778	231	3,009
	SpPur6	29	-	29	-	29
	SpPur7	1,500	0	1,500	364	1,864
	Other	2,519	267	2,786	313	3,100
	Forest Unit Subtotal	**6,361**	**971**	**7,332**	**944**	**8,276**
	Harvest Subtotal	28,329	6,170	34,499	4,552	39,051

Natural Disturbance						
BfDom	BfDom	3,133	37	3,170	50	3,219
BwDom	BwDom	122	-	122	-	122
ConMx	ConMx	1,873	43	1,916	217	2,133
HrdMx	HrdMx	655	84	739	124	862
OCLow	OCLow	59	-	59	40	99
			-		-	
PjPur	PjPur	1,304	139	1,443	79	1,522
			-		-	
PjSMx	PjSMx	2,067	93	2,161	166	2,327
			-		-	
PoPur	PoPur	111	56	167	19	187
			-		-	
SpLoR	SpLoR	420	-	420	864	1,285
			-		-	
SPoor	SPoor	48	77	125	369	494
			-		-	
SpPur	SpPur	3,244	203	3,447	306	3,753
	Disturbance Subtotal	**13,036**	**733**	**13,769**	**2,234**	**16,003**
	Total	**41,366**	**6,902**	**48,268**	**6,786**	**55,054**

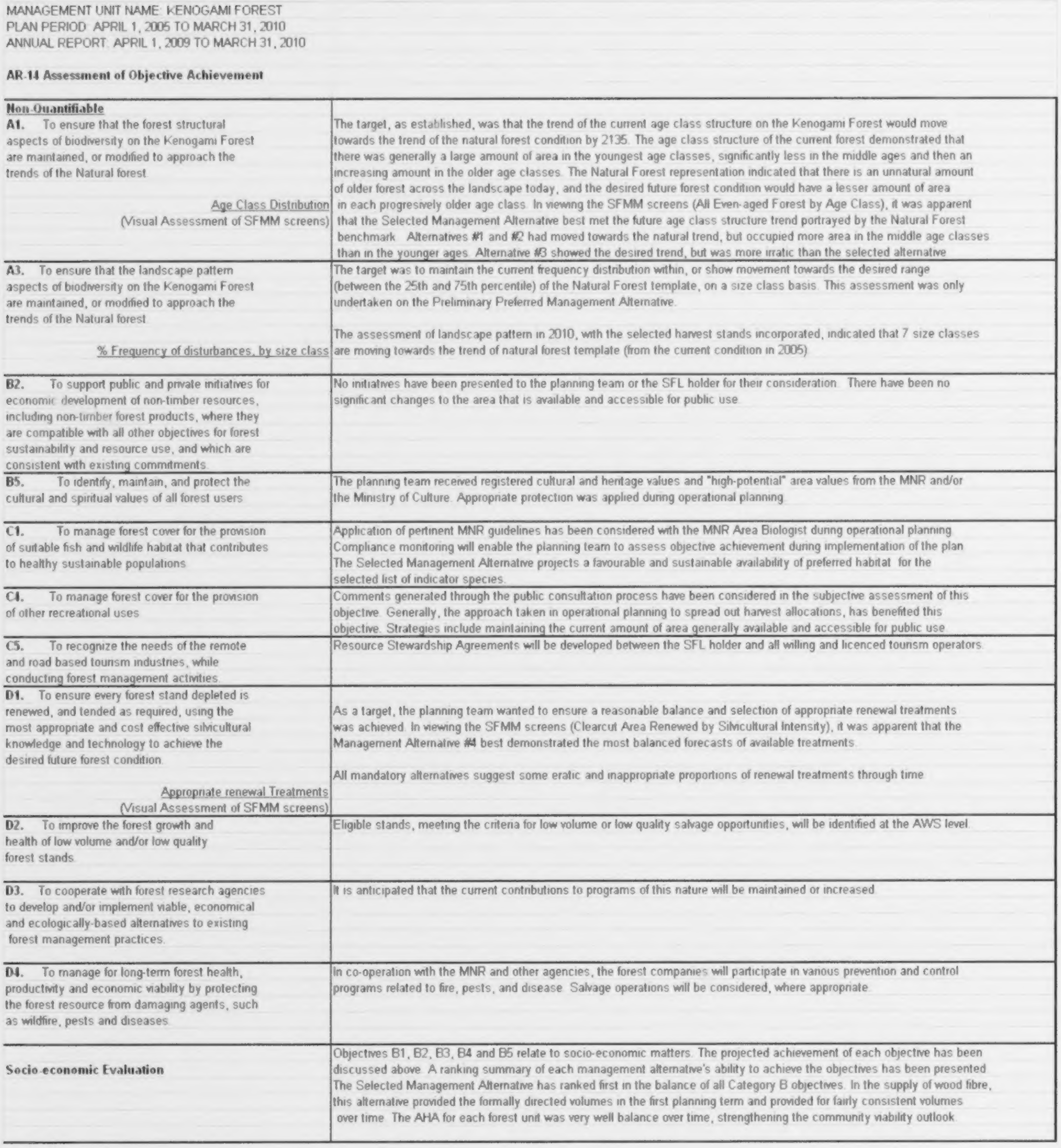


MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL 1, 2005 TO MARCH 31, 2010
ANNUAL REPORT: APRIL 1, 2009 TO MARCH 31, 2010

AR-14 Assessment of Objective Achievement

Management Objective	Indicator	Unit of Measure	Plan Start Level	Desirable Level		Timing of Assessment	Target	Plan End	Target year	LTMD - Projections Short	 Medium	 Long	Assessment
						plan prep/p	quantity/range/trend	to date/plan start2010	2135	2025	2105	2125	
Quantitative Objectives													
Quantifiable													
A1. To ensure that the forest structural aspects of biodiversity on the Kenogami Forest are maintained, or modified to approach the trends of the Natural forest.	Proportion of Old Growth forest area (by forest unit group)	%	Current demand										The new FRI inventory typing from 2005 has increased the amount of old growth on the forest. The forest cover that was used to develop the FMP was not updated and therefore the new FRI was used to obtain this information.
	Upland Conifers		26.0%	decrease		plan prep	13.9%	10.2%	14.0%	16.4%	15.3%	14.0%	
	Lowland Conifers		23.0%	decrease		plan prep	9.5%	19.2%	11.2%	21.9%	12.9%	11.5%	
	Hardwoods		23.8%	decrease		plan prep	8.5%	3.4 [illegible]	8.6%	15.5%	8.6%	8.6%	
A2. To ensure that the forest composition aspects of biodiversity on the Kenogami Forest are maintained, or modified to approach the trends of the Natural forest.	All forest area by forest unit	hectares		Acceptable Levels From	 To			New FRI Own = 1					The ConMx, BwDom and HrdMx forest units may have increased as the FRI does not have enough BF dominated stands to warrant its own FU therefore has been incorporated into other forest units. The area in PjSMx has increased as the requirements for the pure (PjPur, SpPur) forest units have made them purer than previous therefore sending more area to the PjSMx forest unit. The SpLoR forest unit has decreased and the SpPur increased as there is a thought that the new inventory typing may be incorrect.
	Conifer Mixedwood		133,691	71,906	174,217	plan prep	103397	177,780	146,132	146,168	141,704	145,560	
	Balsam Fir Dominated		97,441	37,493	116,929	plan prep	49996	N/A	71,445	96,860	70,446	73,069	
	White Birch Dominated		36,879	19,222	44,255	plan prep	27597	73,067	22,798	28,215	22,301	22,269	
	Hardwood Mixedwood		158,714	51,990	190,457	plan prep	78630	166,588	69,511	142,796	83,084	74,721	
	Other Lowland Conifer		63,013	49,060	75,863	plan prep	62015	56,079	63,068	63,273	63,187	63,021	
	Jack Pine Pure		67,209	69,767	250,060	plan prep	161929	63,200	112,053	88,863	104,975	110,651	
	Pine-Spruce Mixedwood		75,191	60,153	204,026	plan prep	165273	87,569	139,489	84,309	139,516	139,943	
	Poplar Pure		98,329	78,663	138,755	plan prep	115629	107,386	79,326	93,692	83,436	80,090	
	Spruce Lowland-Rich		268,073	214,459	324,689	plan prep	270574	146,040	269,238	269,967	269,315	269,210	
	Spruce Poor		328,932	263,146	404,510	plan prep	336401	345,715	333,676	334,636	333,461	333,753	
	Spruce Pure		262,313	209,850	361,263	plan prep	283794	386,730	340,545	303,734	336,837	334,997	
B1. To provide a sustainable, consistent, and economically viable supply of timber to the local industry or individuals, acquired through environmentally sound practices and to promote the efficient utilization of available wood fibre	ProductionTimber Supply												During Plan preparation the volume of fibre was allocated that was sustainable, consistent and economically viable.
	Spruce, Pine, Fir	(000 m3)	1,291.0			plan prep	1,291.0	1,015.0	1,291.0	1,144.2	1,291.0	1,291.0	
	Poplar		282.0			plan prep	282.0	204.6	171.3	175.6	208.0	282.0	
	Birch		16.7			plan prep	74.0	14.0	13.1	19.7	10.9	14.2	
B1. To provide a sustainable, consistent, and economically viable supply of timber to the local industry or individuals, acquired through environmentally sound practices and to promote the efficient utilization of available wood fibre	Meet Volume Directives												With the 05 FMP inventory and yield curves, the actual volumes predicted were close to being realized. Some discrepancy was due to the insect damamge in the south end of the unit and trying to adjust volumes for that as well as the yield curves may have been optimistic. As well, there were many blocks that were not completely harvested due to the labour dispute and economic conditions encountered.
	Spruce , Pine, Fir	Yes/No	Yes	all planning terms (until 2135)		Plan imp	all planning terms (until 2135)	No	Yes	No	Yes	Yes	
	Poplar		Yes			Plan imp		No	No	No	No	Yes	
	Birch		N/A			Plan imp		N/A	N/A	N/A	N/A	N/A	
	Consistent Volumes (Fluctuation from previous 10-year term)												Because of economic and market conditions, not all volume available was harvested therefore the numbers are below the planned level. Using the predicted volumes, (FMP2011 start volume, and 2005 planned volume) the % were determined.
	Spruce, Pine, Fir (Max 10% decrease permitted)	%	N/A	all planning terms (for 100 yrs)		plan prep	all planning terms (for 100 yrs)	-27%	0%	-10%	0%	0%	
	Poplar		N/A			plan prep		-38%	4%	-25%	4%	0%	
	Birch		N/A			pla[illegible]		-17%	-25%	-9%	-25%	4%	
B3. To preserve the long-term viability and sustainability of the local forest-based communities and businesses.	Appropriate summer/winter mix (Target < 45% AHA in SpLoR & SPoor)	# planning terms achieved	38%	<45% winter for 6 planning terms		plan prep	6 terms <45% winter	1 at 30% so far 9751.4/32218.3	34%	45%	24%	27%	The target of <45% of the AHA in SpLoR and SPoor forest units was realized and lower at <30%. The lower levels are from actual numbers vs the planned area. As the entire planned amount was not harvested, and there were shut-downs occuring in the winter months, this number does not reflect the split that would have occurred if operations had continued as originally planned.

B3. To preserve the long-term viability and sustainability of the local forest-based communities and businesses	Stability of Available Harvest Area (Target < 50% fluctuation from previous term)												
	Conifer Mixedwood	# occurances <50% until 2135 (% achieved)	N/A	< 50% fluctuation term to termby forest unit		Plan prep	< 50% fluctuation from previous term	44.4%	-21.5%	-18.7%	-25.0%	25.0%	The plant start level was determined using the original inventory used during preparation of the 2005 FMP and the information provided from the 2005 new FRI inventory provided the plan end data. This new inventory reflects that in two cases, Balsam Fir Dominated (1640 ha), Hardwood Mixedwood (6483 ha) and Pine/Spruce Mixedwood (6661 ha) forest units did not exist in the 2000 FMP therefore there were no values determined for these. In looking at the % fluctuation, there are 2 cases where the flucuation was greater than 50%, these being PjPur and SpLoR. The fluctuations in these forest units can be attributed to teh new inventory (i.e. there has been more area attributed to the SpPur forest unit that seems to have previously been SpLoR).
	Balsam Fir Dominated		N/A			Plan prep			-33.0%	50.0%	12.5%	50.0%	
	White Birch Dominated		N/A			Plan prep		-38.9%	13.2%	25.0%	-25.0%	-9.7%	
	Hardwood Mixedwood		N/A			Plan prep		5.3%	-50.0%	-36.3%	-41.3%	50.0%	
	Other Lowland Conifer		N/A			Plan prep		6.5%	-26.0%	10.0%	10.0%	2.2%	
	Jack Pine Pure		N/A			Plan prep		-69.9%	-8.2%	-13.0%	25.0%	10.0%	
	Pine-Spruce Mixedwood		N/A			Plan prep		-3.3%	-5.7%	-23.0%	25.0%	1.6%	
	Poplar Pure		N/A			Plan prep		10.2%	-50.0%	-29.2%	47.1%	-5.8%	
	Spruce Lowland-Rich		N/A			Plan prep		-58.9%	15.0%	-16.3%	15.0%	15.0%	
	Spruce Poor		N/A			Plan prep		18.4%	10.0%	10.0%	10.0%	10.0%	
	Spruce Pure		N/A			Plan prep		37.9%	7.5%	-6.7%	-22.1%	-19.7%	
B4 To provide opportunities for First Nations participation in forest management planning activities	Number of Communities Participating	#	6	6		Plan prep	6	6 overall	N/A	N/A	N/A	N/A	First Information Centres were held at Pays Plat, Constance Lake and Ginoogaming First Nation. Second Information Centres were held at Aroland, Long Lake #58 and Pays Plat. Ginoogaming cancelled. Lake Nipigon Ojibway did not request a seperate Information Centres and would attend one of the others (either Public or First Nation). During FMP preparation, there were First Nation representatives that sporatically attended.
C2. To maintain a continuous supply of suitable caribou habitat, distributed both geographically and temporally across the landscape in such a manner as to ensure permanent range occupancy	Maintain 40% of CARNE sub-unit in age classes 80+ years, through time	%	89.5%	40% minimum		Plan prep	40 % minimum	71.0%	47.6%	69.5%	45.3%	48.1%	Minimum met and Caribou mosaic expended to include CARNE as well as area further south to the licence boundary on the Forest. This is in response to the Caribou Recovery Strategy.
C3. To maintain a continuous supply of suitable marten habitat, distributed both geographically and temporally across the landscape	Ensure 10-20% of capable area in suitable condition is arranged in core areas for 20-year intervals over a 60-year period.	%	9.7%			Plan prep	10-20% for a 60-year period	27%	N/A	11.1%	N/A	N/A	The capable marten habitat in suitable condition arranged in cores is at 27% for plan start of 2011. This is due to the expansion fo the Caribou mosaic and he amount of habitat arranged within the mosaic blocks or cores. This number is seen to be reducing in 2031 to 24% and down to 17% in 2071.
D1. To ensure every forest stand depleted is renewed, and tended as required, using the most appropriate and cost effective silvicultural	Cost effectiveness	Average Annual Cost ($)	$7,914	maintain		Plan impl	Most cost effective	$ 3,078.00	$6,372	$6,896	$7,493	$7,589	This number for an average over 5 years is significantly lower than expeceted due to the past economic conditions. These conditions have resulted in less are being available to treat and less area treated.
knowledge and technology to achieve the desired future forest condition	Minimize aerial spray requirements (Target <35% of total treatments)	Planning terms achieved %	21.6%			Plan impl	< 35% of total treatments	22.0%	11.7%	22.3%	16.1%	15.5%	This objective has been met as the 2009 AR reports that 22% of the treatment have been aerial tending and this is less that the target of 35% of the silvicultural treatments.
Preferred Habitat for Selected Wildlife Species *	American kestrel	hectares	9,632	7,706		Plan prep		N/A	14,989	13,066	10,291	13,626	The list of selected widlife species to monitor has been reduced with the FMP2011 planning cycle. Without reloadig an updated forest inventory into the SFMM model and re-running the habitat queries, the plan end numbers cannot be determined for the remaining widlife species. In the case of all species currently tracked, with the exception of the Moose (winter), all species have increased habitat numbers from plan start. Pileated woodpecker habitat decreased from 113,013 to 70,903 ah but is still higher than the target of 29,661 ha. Marten habitat decreased from plan start to 457,772 ha which is higher than the planned level in 2025. Caribou habitat and winter habitat has increased too and is higher than the acceptable level stated. Moose habitat is higher than plan start and that planned for in 2025. Moose (winter) is higher than plan start but lower than the area in the target year.
	Spruce grouse		103,428	82,379		Plan prep		N/A	164,468	126,913	152,507	155,500	
	Great grey owl		458,345	277,114		Plan prep		N/A	327,694	343,817	343,841	329,898	
	Pileated woodpecker		113,013	36,733		Plan prep	Decrease	70,903	29,681	76,938	32,777	32,180	
	Boreal chickadee		695,482	411,375		Plan prep		N/A	523,703	568,671	526,431	525,933	
	Golden crowned kinglet		209,704	147,253		Plan prep		N/A	183,141	195,784	193,308	180,685	
	Swainsons thrush		282,509	140,139		Plan prep		N/A	146,032	241,841	172,161	154,089	
	American redstart		176,309	107,595		Plan prep		N/A	123,323	172,071	147,899	130,726	
	Connecticut warbler		403,697	322,598		Plan prep		N/A	427,265	445,010	410,633	420,423	
	White-throated sparrow		701,986	446,406		Plan prep		N/A	478,962	594,038	458,632	467,770	
	Snowshoe hare		175,636	90,307		Plan prep		N/A	101,465	151,898	100,567	100,067	
	Northern flying squirrel		487,526	289,014		Plan prep		N/A	286,657	373,216	292,514	276,567	
	Boreal red-backed vole		422,861	256,347		Plan prep		N/A	304,690	329,440	321,397	309,037	
	Marten		527,637	326,890		Plan prep	Decrease	457,722	386,196	428,527	397,740	389,009	
	Caribou		729,357	569,109		Plan prep	Increase	973,520	743,188	696,624	753,684	749,867	
	Caribou (winter)		280,812	133,628		Plan prep	Decrease	323,453	162,532	252,946	166,041	156,882	
	White-tailed deer		172,684	99,093		Plan prep		N/A	115,868	165,834	108,593	111,946	
	White-tailed deer (winter)		225,303	107,838		Plan prep		N/A	116,199	198,181	118,586	124,392	
	Moose		367,567	236,651		Plan prep	Decrease	407,953	244,786	325,389	266,744	260,145	
* Objectives were not set for this indicator of sustainability	Moose (winter)		427,278	340,262		Plan prep	Decrease	509,636	545,013	470,025	508,398	531,834	



MANAGEMENT UNIT NAME: KENOGAMI FOREST
PLAN PERIOD: APRIL 1, 2005 TO MARCH 31, 2010
ANNUAL REPORT: APRIL 1, 2009 TO MARCH 31, 2010

AR-14 Assessment of Objective Achievement

Non-Quantifiable **A1.** To ensure that the forest structural aspects of biodiversity on the Kenogami Forest are maintained, or modified to approach the trends of the Natural forest. Age Class Distribution (Visual Assessment of SFMM screens)	The target, as established, was that the trend of the current age class structure on the Kenogami Forest would move towards the trend of the natural forest condition by 2135. The age class structure of the current forest demonstrated that there was generally a large amount of area in the youngest age classes, significantly less in the middle ages and then an increasing amount in the older age classes. The Natural Forest representation indicated that there is an unnatural amount of older forest across the landscape today, and the desired future forest condition would have a lesser amount of area in each progresively older age class. In viewing the SFMM screens (All Even-aged Forest by Age Class), it was apparent that the Selected Management Alternative best met the future age class structure trend portrayed by the Natural Forest benchmark. Alternatives #1 and #2 had moved towards the natural trend, but occupied more area in the middle age classes than in the younger ages. Alternative #3 showed the desired trend, but was more irratic than the selected alternative
A3. To ensure that the landscape pattern aspects of biodiversity on the Kenogami Forest are maintained, or modified to approach the trends of the Natural forest. % Frequency of disturbances, by size class	The target was to maintain the current frequency distribution within, or show movement towards the desired range (between the 25th and 75th percentile) of the Natural Forest template, on a size class basis. This assessment was only undertaken on the Preliminary Preferred Management Alternative. The assessment of landscape pattern in 2010, with the selected harvest stands incorporated, indicated that 7 size classes are moving towards the trend of natural forest template (from the current condition in 2005)
B2. To support public and private initiatives for economic development of non-timber resources, including non-timber forest products, where they are compatible with all other objectives for forest sustainability and resource use, and which are consistent with existing commitments.	No initiatives have been presented to the planning team or the SFL holder for their consideration. There have been no significant changes to the area that is available and accessible for public use.
B5. To identify, maintain, and protect the cultural and spiritual values of all forest users.	The planning team received registered cultural and heritage values and "high-potential" area values from the MNR and/or the Ministry of Culture. Appropriate protection was applied during operational planning.
C1. To manage forest cover for the provision of suitable fish and wildlife habitat that contributes to healthy sustainable populations.	Application of pertinent MNR guidelines has been considered with the MNR Area Biologist during operational planning. Compliance monitoring will enable the planning team to assess objective achievement during implementation of the plan. The Selected Management Alternative projects a favourable and sustainable availability of preferred habitat for the selected list of indicator species.
C4. To manage forest cover for the provision of other recreational uses.	Comments generated through the public consultation process have been considered in the subjective assessment of this objective. Generally, the approach taken in operational planning to spread out harvest allocations, has benefited this objective. Strategies include maintaining the current amount of area generally available and accessible for public use.
C5. To recognize the needs of the remote and road based tourism industries, while conducting forest management activities.	Resource Stewardship Agreements will be developed between the SFL holder and all willing and licenced tourism operators.
D1. To ensure every forest stand depleted is renewed, and tended as required, using the most appropriate and cost effective silvicultural knowledge and technology to achieve the desired future forest condition. Appropriate renewal Treatments (Visual Assessment of SFMM screens)	As a target, the planning team wanted to ensure a reasonable balance and selection of appropriate renewal treatments was achieved. In viewing the SFMM screens (Clearcut Area Renewed by Silvicultural Intensity), it was apparent that the Management Alternative #4 best demonstrated the most balanced forecasts of available treatments. All mandatory alternatives suggest some eratic and inappropriate proportions of renewal treatments through time.
D2. To improve the forest growth and health of low volume and/or low quality forest stands.	Eligible stands, meeting the criteria for low volume or low quality salvage opportunities, will be identified at the AWS level.
D3. To cooperate with forest research agencies to develop and/or implement viable, economical and ecologically-based alternatives to existing forest management practices.	It is anticipated that the current contributions to programs of this nature will be maintained or increased.
D4. To manage for long-term forest health, productivity and economic viability by protecting the forest resource from damaging agents, such as wildfire, pests and diseases.	In co-operation with the MNR and other agencies, the forest companies will participate in various prevention and control programs related to fire, pests, and disease. Salvage operations will be considered, where appropriate.
Socio-economic Evaluation	Objectives B1, B2, B3, B4 and B5 relate to socio-economic matters. The projected achievement of each objective has been discussed above. A ranking summary of each management alternative's ability to achieve the objectives has been presented. The Selected Management Alternative has ranked first in the balance of all Category B objectives. In the supply of wood fibre, this alternative provided the formally directed volumes in the first planning term and provided for fairly consistent volumes over time. The AHA for each forest unit was very well balance over time, strengthening the community viability outlook.